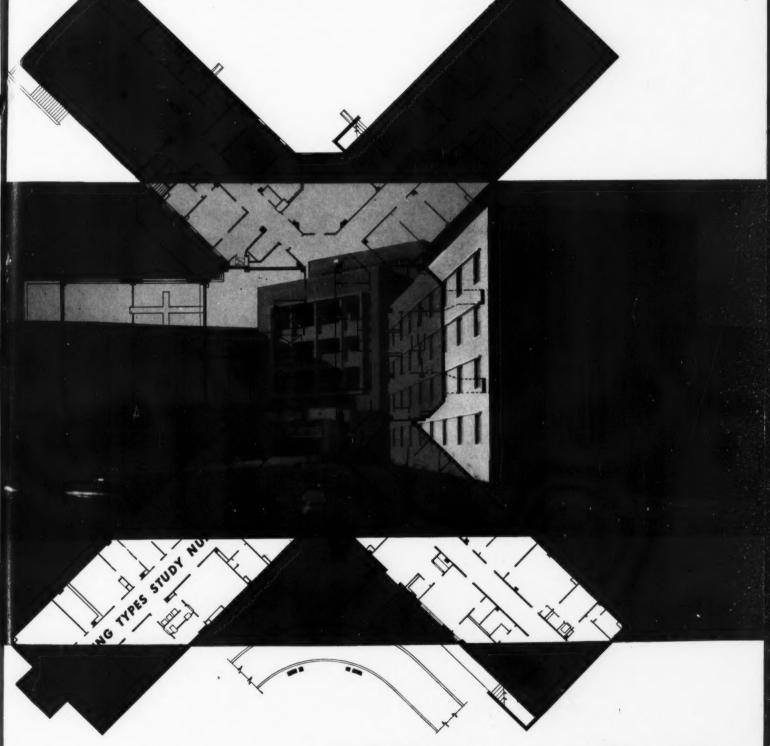
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APRIL 1952



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Top-of-the-list cause of fires, according to study after study, turns out to be just plain human carelessness.

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Horn, Ir., 855 Park Square Bldg.; CHICAGO—C. B. Riemersman, Robert T. Franden, Davids Mortalising Mgr.; Benton B. Horn, Ir., 855 Park Square Bldg.; CHICAGO—C. B. Riemersman, Robert T. Franden, David K. Bortz, 700 Merchandise Mart; CLEVE-LAND—John C. Jackson, Joseph F. Palmer, John W. Setear, 321 Hanna Bldg.; DALLAS—Joe Sanders, 2909 Maple Ave.; LOS AN-GELES—Bob Wettstein, 672 South Lafayette Park Place; PHILADELPHIA—Tom Tredwell, 1321 Arch St.; PORTLAND—Bob Wettstein, 1220 S.W. Stark St.; SAN FRANCISCO—Bob Wettstein, Howard Bldg., 209 Post St.

SCHLAGE CYLINDRICAL LOCKS...Time-Proven

Schlage Dependability—proven by
25 years service—makes Schlage Locks
leading choice for today's important buildings



PEACHTREE—SEVENTH BUILDING

EQUIPPED WITH SCHLAGE "NOVO" DESIGN LOCKS



Pagehtree — Seventh Tellding, Atlanta, Georgia Architects, Alexander and Rothschild Contractor, Charles R. Massell

"The proved, law-cost maintenance record of Schlage Locks was an important factor in our final selection"—

SCHLAGE

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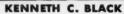
In the offices of a Lansing, Michigan, insurance company: lighting that provides "vision insurance"

If you're looking for proof that architect-controlled construction produces a better job—you'll find a perfect example in the Auto Owners Insurance office building in Lansing, Mich. This impressive reinforced concrete structure, faced with Indiana limestone, is the creation of a father-and-son team of architects, Lee Black and Kenneth C. Black. They supervised and coordinated all phases of the construction, interior decorating, furnishings and landscaping.

The results were great. The owners got full value for every dollar spent. Waste and duplicated effort were eliminated and, in several instances, actual savings were effected. The company's employees got the best of working conditions, comfort and convenience. The community got a proud milestone in its civic development. (continued on next page)









LEE BLACK

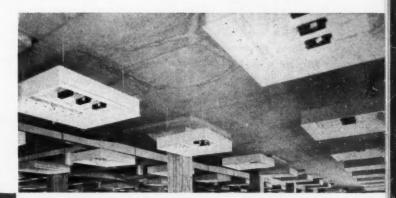
It's particularly fitting that this office building boasts one of the finest lighting installations in the country. In effect, this progressive insurance company "insures" its own people against eyestrain and nervous fatigue while on the job.

Some 600 Day-Brite "Four-By-Four" units furnish the lighting in all large office areas—one of the largest single installations of this type ever made. The "Four-By-Four" fixtures are recessed into the suspended ceiling, on 10-foot centers, and are supported by steel rods from inserts embedded in the concrete superstructure above. (See photo at right.) An improved method of hanging the fixtures, developed by the electrical contractor and Day-Brite engineers, resulted in a substantial saving in construction work.

Architects Black and Black and their consulting engineers, GEORGE WAGSCHAL Associates, who selected Day-Brite "Four-By-Fours," report complete satisfaction. After six months in service, under normal maintenance conditions, this "Four-By-Four" installation is delivering an average of 60 footcandles of illumination. That's real lighting performance!

And speaking for his company, Mr. Vern V. Moulton, president of Auto-Owners, sums it up this way: "I couldn't be more pleased with our lighting. I'll match it against any other office lighting installation anywhere."

There's an entire line of Day-Brite fixtures available to you ... each designed and built by master craftsmen. Your important commissions deserve the finest lighting—and, always, you can stake your career on a Day-Brite specification.



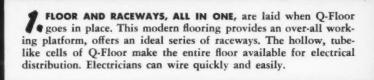
PRODUCT DATA, DAY-BRITE "FOUR-BY-FOUR" UNITS

BASIC UNIT measures 48" x 48" x 9" deep, die-formed steel construction. Same basic unit for six, eight or ten 40-watt fluorescent lamps. Recessed, surface or suspension mounting. LOUVER ASSEMBLY hinged on two sides; BOXCO louvers are double-wall construction, interlocked for extreme strength. HOT-BONDED SUPER-WHITE finish, rust inhibited. INDIVIDUALLY WIRED, ready for installation. ETL Certified ballasts, no-blink type starters.



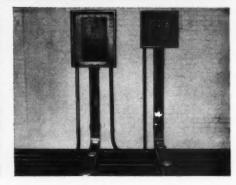


Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Missouri. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario. Distributed nationally by leading electrical wholesalers.









HEADER DUCTS are connected to panel

ducts. These ducts provide adequate capacity for present, as well as future, wiring.

boxes by means of special ells and panel

When these ducts are coupled to the head-

ers, your Q-Floor distribution system is com-

plete, ready for wiring. After the floor has

HERE ARE 5 EASY STEPS

to complete electrical flexibility



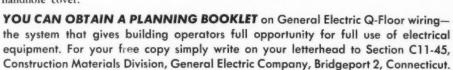
2 HEADER DUCTS GO IN at right angles, across the floor cells. These ducts are the main distribution fittings. They bring the wires from the load centers and make them accessible to the floor cells. Separate headers are used for telephone, signal, and power systems. Note the large, easy-to-use handholes used for running circuits through to the particular cells they feed.



Q-FLOOR WIRING is fast and easy. There are eight possible outlet locations in every square foot of floor area. The electrician merely spots the location of the needed outlet and drills through to the Q-Floor cells beneath. With this simple operation, the raceway is open and ready for wires to be pulled through from the header duct. Access to the header duct is simply a matter of removing the proper handhole cover.



5. Coursets anywhere, anytime. General Electric Q-Floor wiring is as flexible in years to come as when installed. Adding circuits or rewiring involves no ripped up floors, no disruptions of business. The location of any raceway can be determined easily at any time. An adjustable floor tap with extension makes outlet installation a matter of minutes. With Q-Floor wiring, buildings stay electrically young.



GENERAL



ELECTRIC

THE RECORD REPORTS

THE WORST IS OVER: MOST NON-DEFENSE BUILDING IS PROMISED NPA APPROVAL FOR THIRD-QUARTER STARTS

Fleischmann Can See "Near Normal" Construction Operations by Last Quarter; End of Controls on Some Types of Steel and Aluminum Not Far Off; Producers Reiterate Reports of Easing Supply Outlook; Official Attitude on Homebuilding Unchanged

BUILDING TYPES that for the last year have provided more headaches than business for architects and engineers will be on the boards again in increasing numbers as the effect of moves by the Defense Production Administration that indicate increasing recognition of the easing in supplies of "critical" metals.

An important green light flashed with the announcement by DPA Administrator Manley Fleischmann on March 17 that practically all pending applications to start non-defense commercial and industrial buildings and most new applications will be approved for the second half of the year.

Projects that do not get metal rations for the third quarter will get advance allotments for the fourth quarter, Mr. Fleischmann said, so that planning and site preparation can go ahead.

Amusement and recreation buildings, and structures the DPA considers a "frivolous" use of metal, were not included; but the go-ahead for commercial construction generally relaxed a ban that had held up virtually all non-defense building in that field since February 1951.

Fowler Lists Criteria

National Production Authority Administrator Henry Fowler named two important criteria to be used by the government in approving construction applications.

First, the project must be in a state of "engineering readiness"—that is, it must be ready to absorb metal rations as soon as they are issued; and second, all non-essential use of copper must be held to the absolute minimum.

Selective Decontrol Forecast

Mr. Fleischmann said he is considering methods of removing controls on certain types of steel and aluminum—the first official recognition of the validity of cries from producers of the metals that oversupply was becoming a problem in some lines.

Carbon steel, except for bars, plate, tubing and certain other forms which may still be scarce, might be removed from CMP by the fourth quarter, the DPA chief indicated, and aluminum may be decontrolled in the first quarter

of 1953. Copper would still remain under tight government curbs.

Before Mr. Fleischmann's statement, the mobilizers' position had been that shape-by-shape decontrol would only lead to confusion.

More Schools, Hospitals

Major increases in allotments will go to schools, hospitals and highway construction, Mr. Fleischmann said, but there was no indication that the relaxation would be extended to home building.

Another type that appeared sure of materials by the end of the year: television stations. The Federal Communications Commission was expected to lift its ban on new TV stations.

(Continued on page 26)

M-100: SCHEDULE I

Quantities of controlled materials which may be obtained under the self-authorization procedure and which may be used in 1-through-4 family residential structures, the construction of which is commenced after Mar. 5, 1952.

Type of Construction

Residential structures using steel pipe water distribution system, per dwelling unit.

Residential structures using copper pipe water distribution system, per dwelling unit.

Residential structures using steel pipe for interior water supply pipes where local building code requires Type B or K copper tubing for underground water service connections, per dwelling unit.

Residential structures using copper pipe water distribution system where local building code requires Type B or K copper tubing for underground water service connections, per dwelling unit.

Residential structures using sheet metal ducts for heat distribution.

Residential structures using electrical

energy heating systems.

Carbon Steel (excluding structural shapes)

Not more than 1800 lbs. per dwelling unit.

Not more than 1450 lbs. per dwelling unit.

Not more than 1635 lbs. per dwelling unit. Copper and Copper Base Alloys

Not more than 35 lbs. per dwelling unit.

Not more than 135 lbs. per dwelling unit.

Not more than 80 lbs. per dwelling unit.

Not more than 1450 lbs. per dwelling unit. Not more than 145 lbs. per dwelling unit.

In addition to the amounts of controlled materials allowed above, not more than 500 lbs. of carbon steel per dwelling unit.

In addition to the amounts of controlled materials allowed above, not more than 15 lbs. of copper per dwelling unit.

Structural shapes (except foreign, as noted above), alloy and stainless steel A products may not be used for the above types of construction. However, aluminum may be used for the conduction of electricity in place of copper on the basis of one pound of aluminum for each two pounds of copper. In such event, the allowable quantity of copper is to be reduced accordingly.

FIVE SCHOOL BUILDINGS CITED FOR "OUTSTANDING DESIGN"



Stanley Humphries School, Castlegar, B.C.; Sharp & Thompson, Berwick,

Pratt, Architects



Long Beach Elementary-Junior High School, Long Beach, N. Y; Reisner & Urbahn, Architects



School Executive Magazine's First Annual Competition Draws 186 Entries

AWARD WINNERS in the first annual Competition for Better School Design sponsored by School Executive Magazine were exhibited at the regional convention of the American Association of School Administrators February 23–27 in St. Louis. Also on exhibit were the winners in the A.A.S.A.-A.I.A. Regional Competition for school buildings.

The five winning entries and one Canadian school which won a special award in the *School Executive* Competition are shown on these pages. In addition, there were 15 Honorable Mentions and four Special Mentions.

One hundred eighty-six approved entries were received; 109 projects were actually submitted. The competition was open to all architectural firms in the United States and Canada which during 1951 designed or constructed a new school building in whole or in part.

Morris Ketchum, of Ketchum, Gina, and Sharp, Architects, New York, was chairman of the panel of judges chosen by *The School Executive* in cooperation with the A.I.A. Committee on Competitions.

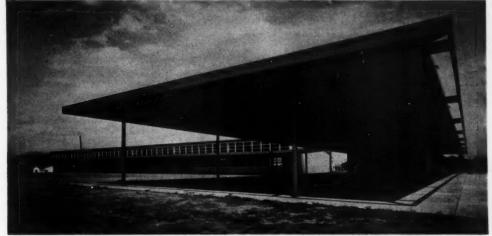
Other judges were: Robert Hutchins, Moore and Hutchins, Architects, New York; Walter Kilham Jr., O'Connor and Kilham, Architects, New York; Ray L. Hamon, Chief of the School Housing Section, U. S. Office of Education; and Benjamin C. Willis, Superintendent of Schools, Buffalo.

Honorable Mentions were given to the following architectural firms: Aeck Associates, Atlanta; Clark and Beuttler, Robert Evans, San Francisco; Warren S. Holmes and Company, Lansing, Mich.; Johannes and Murray, Silver Springs, Md.; Kelly and Grüzen, New York; Lyles, Bissett, Carlisle and Wolff, Columbia, S. C.; McLeod and Ferrara, Washington, D. C.; Perkins and Will, Chicago.

Also Sharp and Thompson, Berwick, Pratt, Vancouver, B. C.; Sibley and Sibley, West Hartford, Conn.; Spaulding-Rex-Deswarte, Los Angeles; and Weiler and Strong, Madison. Wis.

Vine Street School, Bangor, Maine; Eaton W. Tarbell, Architect

ARCHITECTURAL RECORD



Westwood Elementary School, Stillwater, Okla.; Caudill, Rowlett, Scott & Associates, Architects



Colonial Heights Elementary School, Yonkers, N. Y.; Edward Fleagle, Architect

Richard Garrison



Mira Vista Elementary School, El Cerrito, Cal.; John C. Warnecke, Architect

Rondal Partride

MICHIGAN ARCHITECTS HOLD BIG AND BUSY MEETING



Jury members in Small House Competition look over the exhibit. Standing: Clair W. Ditchy, F.A.I.A., A.I.A. secretary; Jean Hebrard, F.A.I.A.; Suren Pilafian, A.I.A.; front row: A.I.A. Regional Director John Richards; Alden Dow, A.I.A.

Illiam F. Bradley

Awards in a small house competition sponsored by the Michigan Society of Architects and supported in prize money by a real estate developer were presented at the Michigan Building Industry Banquet which closed the Society's 38th annual convention at Detroit March 5–7.

Howard T. Keating of Birmingham, Mich., who contributed \$1400 to the prize fund, made the presentations.

First prize went to Gordon A. Sheill,

A.I.A., and Harold Binder, designer, both of the office of Albert Kahn Associated Architects and Engineers, Inc. Second prize was won by Charles D. Hannan, A.I.A., and Herbert L. Hawthorne, designer; and third prize by Morris Jackson of Smith, Hinchman and Grylls, Architects and Engineers.

Close to 400 members and guests attended the convention, and more than 1000 people were at the Industry banquet.

Eric Mendelsohn, San Francisco architect, was the featured speaker of the convention and his topic was "My Contribution to Contemporary Architecture." He used slides to illustrate his talk and these included examples of his work in Germany, Palestine, Russia, England and America. The best-known of these were the free-flowing Einstein Tower at Potsdam; the Stockholm Department Store with its semi-circular glass tower; and his factory designs for pre-Nazi Germany.

Other speakers included Dan Kiley, landscape architect, and A.I.A. President Glenn Stanton.

Announcement was made at the banquet of establishment of a \$5000 scholarship for architectural research established by a gift from C. Allen Harlan, president of Harlan Electric Co., Detroit.

MEMORIAL DESIGNS EXHIBITED AT VIRGINIA CONVENTION

THE NINETEEN ENTRIES in last winter's Virginia World War II Memorial Competition were on exhibit as one feature of the annual meeting of the Virginia Chapter of the American Institute of Architects February 15–16 in Richmond.

Construction is expected to begin next spring on the memorial, which will be erected from the winning design (photo of rendering below) by Samuel J. Collins of Staunton, in collaboration with his nephew, Richard F. Collins of Silver Springs, Md.

The annual banquet and some of the other sessions were held jointly with the Virginia Society of Professional Engineers, which was meeting at the same time. Highlight of the joint sessions was the seminar on prestressed concrete, at which Beanie Miesal, Jack Lacey, Bill

Blanton and Phil Melville, researchers and engineers, were among the speakers. One Virginia example of prestressed concrete construction, Sullivan's, Inc., Store in Kilmasnock, came in for discussion.

Louie L. Scribner of Charlottesville was reelected president of the Society.

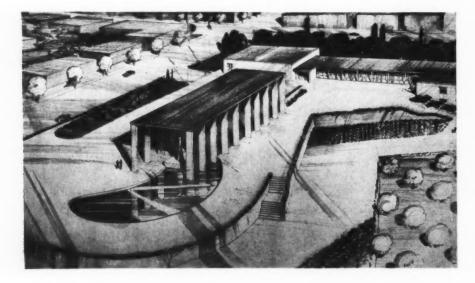


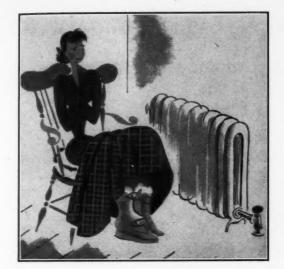
THE FIRST ANNUAL CONFERENCE of the Western Mountain District of the American Institute of Architects last month drew 225 architects from four of the district's five states to Colorado Springs for a highly stimulating and eventful session.

Seminars on urban redevelopment, prestressed concrete and landscape architecture were outstanding.

W. Gordon Jamieson of Denver was nominated by acclamation to be a candidate for regional director at the A.I.A. convention in June.

There was much indignant protest over the news that the School of Architecture at Denver University might be closed as "unprofitable."





COLD FEET...

Dampness, Tremendous Heat Loss, Peeling Paint, Timber Rot, are the Products of Usual Crawl Space Construction

Nature's Law: Heat flows to cold in any direction by Radiation and Conduction.

So warm walls, ceilings, furniture, people, even dust particles, transmit downwards invisible energy rays through the air to a cold floor where they are absorbed, turned into heat, and conducted down. Also, heat flows down by direct conduction through solids, wherever walls, furniture and people touch the colder floor.

How to prevent condensation and timber rot, conserve heat and create foot comfort, are explained by the National Housing Agency. Its "Technical Bulletin No. 38" reports numerous tests in which the National Bureau of Standards subjected multiple aluminum surfaces in crawl spaces to dampness from below, deliberate fogging, and tremendous temperature drops. To quote some of the findings:

DEWPOINT NEVER REACHED

"The temperature of these surfaces was observed to be above the dew-point of the contacting air under all test conditions."

"With average outside air temperatures between 30.9 and 32.2 degrees F., the temperatures of the upper surface of the insulation remained above the dew point of the air to which it was exposed by 12.5 to 15.7 degrees F.," with only 2 layers having 4 aluminum surfaces, forming 3 reflective spaces.

"When the outside temperature dropped from 56.3°F. to 31.4°F. in six hours, the insulation temperatures remained above the dew point by 14.6 to 10.3°F. When the ambient temperature was dropped from 39.2°F. to 9.2°F. in 24 hours, the insulation temperatures remained above the dew point by 12.9 to 5.8°F.," with only one layer of insulation, two reflective surfaces and spaces.

CONDENSATION CANNOT OCCUR

"As a further indication of lack of condensation, the upper surface of the upper layer of insulation was deliberately fogged during several of the tests. Each time the surface of the insulation was so fogged, the condensed moisture disappeared within 5 to 10 minutes."

"The results indicate that condensation would not occur between the floor and the insulation or between the two layers of insulation during any probable winter conditions."

"Reflective insulation produces a marked rise in the temperatures of the floor surface."

ORDINARY INSULATIONS SPILL OUT

Vapor flows from areas of greater density to those of lesser. The lower its temperature, the less vapor can air retain in suspension.

Ordinary insulations, including asphalt paper covered ones (asphalt is not impervious to vapor, only to moisture), get soaking wet in crawl spaces, because of condensation on the fibres from ambient vapor, and vapor flow from the earth below and the building

above. So they tear at the staples and elsewhere because of wetness and added weight, and spill their contents to the earth, unless a costly support is built underneath, in which case timber rot is fostered by the wet mass.

Multiple accordion aluminum sheets weigh less than 1 oz. per sq. ft., are impervious to vapor, are non-condensation-forming, do not absorb nor retain any moisture, need only staples for support. They bar heat flow by Radiation with their 3% absorptive and 3% emissive surfaces. Practically no heat flows by Conduction through their multiple air spaces for air is a poor conductor. There is no Convection heat flow downwards.

NON-CONDENSATION FORMING INSULATION

One commercial form of multiple accordion aluminum, Infra Insulation Type 6, is pre-fabricated with three sheets of tough aluminum and two separating fibres to automatically form six reflective spaces, six fully reflective surfaces, as it is stapled in place, simply and speedily. Infra Type 4 provides 4 reflective spaces. For shallow structural spaces (less than 2") especially under floors, Type 4 Jr. is suggested.

For a more detailed discussion of the principles of heat and vapor flow and their practical application to the prevention of heat loss, discomfort and destructive condensation, consult "Technical Bulletin No. 38" and Alexander Schwartz's "Simplified Physics of Vapor and Thermal Insulation." Copies of either or both sent FREE.

INFRA THERMAL FACTORS, DOWNHEAT

Type 6 C.044 R22.72 = 9" Dry rockwool

Type 4 C.065 R15.38 = 6" Dry rockwool

Type 4 Jr.* C.097 R10.30 = 41/5" Dry rockwool

*In 1" space.

INFRA INSULATION, INC. 525 Broadway, New York, N.Y.—WORTH 4-2241

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Fine Flush Valves for Fine Buildings

For complete information on Watrous Flush Valves write for Catalog No. 4





Among Watrous Fine Features

Self-Tightening Handle Packing

The spring-toaded packed stem in Watrous Flush Valves automatically maintains proper tension on the packing at all times. Provides real protection against leakage, yet requires no periodic tightening.

School of Medicine and Dentistry and Strong Memorial Hospital of the University of Rochester, Rochester, N. Y.

Shown at left in this aerial view is New Psychiatric Clinic.

This outstanding Medical Center is typical of the many fine buildings in which Watrous Flush Valves are installed.

KAELBER & WAASDORP

Architects

A. W. HOPEMAN & SONS CO.
General Contractors

WRIGHT & ALEXANDER CO.

Plumbing Contractors



ADJUSTABLE FLUSH VALVES

THE IMPERIAL BRASS MANUFACTURING CO.

1240 W. Harrison Street, Chicago 7, Illinois



At the BRAB conference: Paul Cadwallader, Bennington, N. J., lumber dealer; Prof. of Architecture Kenneth Sargent, Syracuse; Leonard Haeger; Alfred Ebert, Cleveland painting contractor



Conference Chairman Tyler Stewart Rogers; L. V. Teesdale, U. S. Forest Products Lab.; Frank Rowley, Minnesota professoremeritus; C. E. Lund, Minn. Engineering Experiment Station

One of the knottlest problems in current construction — condensation control — came in for thorough probing and discussion at the latest technical conference of the Building Research Advisory Board in Washington late in February. The conference was held at the National Academy of Sciences and was arranged by William H. Scheick, executive director of BRAB. The conference chairman was Tyler Stewart Rogers. An impressive group of technical experts presented papers covering condensation problems as related especially to paint problems and insulating materials.

To open the discussion a lively panel had been arranged to present the practical aspects of the problem. Here the down-to-earth views of an architect, a merchant builder, a lumber dealer and a painting contractor were aired. Thus, right at the start, the scientists and technicians were presented with a definite statement of condensation problems from the viewpoint of men in the field.

Moderator of this opening panel was Leonard Haeger, Research Director of the National Association of Home Build-

Following the discussion of practical problems, Professor C. E. Lund of the University of Minnesota Engineering Experiment Station presented a paper on technological aspects of the problem. This was followed by "Mechanics of Moisture Movement," a study by J. D. Babbitt of the Canadian Scientific Liaison Office.

In the field of current technical progress, which was the subject of the afternoon session of the first day of the conference, another panel discussion was staged devoted to paint films. The subject was introduced by E. J. Dunn, Jr., of the National Lead Company, and members of the panel were W. G. Vannoy, E. I. duPont deNemours & Co.; G. G. Sward, National Paint, Varnish & Lacquer Assn.; and W. A. Gloger, National Lead Company. The moderator was J. S. Long, Devoe and Reynolds.

Other subjects covered were paper and foil films, Floyd Newkirk moderator; insulation and construction problems, L. V. Teesdale, speaker and moderator. Members of the panel devoted to this subject were R. S. Dill, Bureau of Standards; Frank Rowley, University of Minnesota; Frank Parsons, National Mineral Wool Assn.; and A. S. Bull, Insulite Div., Minnesota & Ontario Paper Co.

The final session of the conference was devoted to future technical and educational opportunities with a panel presided over by Professor E. R. Queer of Pennsylvania State College.



- Drawn for the RECORD by Alan Dunn

"I was their coordination specialist — and then they asked me to decentralize —"

FOUR HOUSING PROJECTS IN CALIFORNIA CALLED BEST DEVELOPMENTS OF 1951

Four housing developments in California have been cited by the Architectural Board of Review of Southwest Research Institute's Quality House Program as the best builders' developments approved by the Institute during 1951.

Frederick E. Emmons and A. Quincey Jones, Anshen and Allen, were architects and Eichler Homes, builders, for all four projects — Charleston Meadows, Channing Park and Fairmeadow, all in Palo Alto, and Ladera, in Menlo Park.

Second honors went to Robert Morris Park, Morristown, N. J., a project approved late in 1950 and considered with this year's projects in accordance with a decision of the Board at the time last year's award was made. Nemeny and Geller were architects, Lynch and Kline, site planners. Owner is Standard Holding Company and Edward S. Klausner is the builder.

The Board also recommended a special mention for Conantum on the Sudbury River, Concord, Mass., which was commended for "superb" site planning. Carl Koch and Associates were the architects, Conantum Realty Trust, the builder.

12 Projects Considered

Of the 20 projects approved during 1951, the Board gave serious consideration to 11 and the Morristown project from last year made the total reviewed for the award 12.

The effort of the Board in selecting the

award winner was to cite the project which best exemplified the aim of the Quality House Program—to make houses of high quality available to the public at moderate prices.

Honorable Mentions Given

Three honorable mentions were given by the Board:

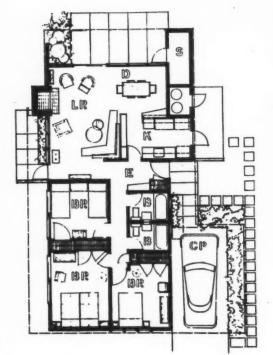
Vista Val Verde Ranches, Provo, Utah; W. Rowe Smith, architect; Delmar C. Kenner, builder.

Orchard Hill, Branford, Conn.; Peter Powers Hale, architect; The Builders Corporation, builder.

Holmes Run, Fairfax County, Va.; Keyes, Smith and Satterlee, architects, Francis D. Lethbridge, associate; Luria Brothers, Inc., builder.

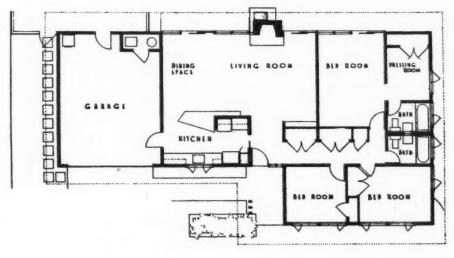


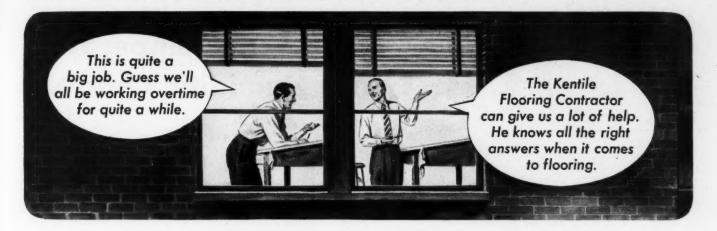




House in the Fairmeadow development is shown in photo (at left above) and plan (left). Price: \$14,750. House in Channing Park: photo at right above; plan below. Price: \$19,750–\$20,750. Units in all the

California projects were commended for good design, skillful use of plank and beam roof construction, good circulation, paved terraces, service courts and fences for privacy. All have radiant heating





Consider the Kentile Flooring Contractor a willing addition to your staff

Due to the complexities of modern flooring materials available today, selection is increasingly a job for trained flooring experts... men like the Kentile Flooring Contractor whose years of study and experience qualifies him to choose the right floor for every installation... the one floor that has most to offer in appearance, durability,

and economy in the use to which it will be put.

Whether the problem is one of new construction or the remodeling of existing facilities, the Kentile Flooring Contractor is available night and day to help you select the floor that will give you the most for your money. Call on him as you would any member of your actual staff.



KENTILE Asphalt Tile is preferred for commercial and industrial installation, large and small, because it always looks fresh and new in spite of constant daily traffic . . . resists dirt, stain and wear for long years of easy, inexpensive cleaning ... retains its original, locked-in colors with only an occasional no-rub waxing. And, Kentile's low initial cost plus speedy, tile by tile installation over any smooth, firm surface provides moneysaving advantages where business must continue without cost-consuming delay.

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PROMINENT CONTEMPORARY HOSPITALS USING

POWERS

Pneumatic Temperature and Humidity Control



A Temperature Reaction is one of the first events in the life of a new born child —and throughout life temperature and humidity affect its comfort and health.



Little Traverse Hospital, Petoskey, Mich.

Architects: Skidmore, Owings & Merrill, Chicago
Consulting Engineer: Samuel R. Lewis, Chicago
Contractor: Lansing Heating & Ventilating Co., Lansing, Mich.



Powers control provides optimum temperature and humidity for patients, doctors and nurses, in operating and recovery rooms, delivery and X-ray rooms and nurseries, private rooms and wards.



Male Ward Building, Western State Hospital, Fort Steilacoom, Wash. Architect: A. Gordon Lumm, Tacoma, Washington Engineer: James B. Notkin, Seattle, Wash. Contractor: P. S. Lord, Portland, Ore.

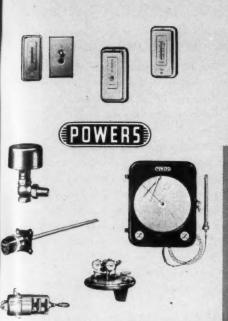


Proper Temperature—external and internal, hastens recovery of patients.



St. Joseph-Benton Harbor Memorial Hospital, St. Joseph, Mich. Architects: Fugard, Burt, Wilkinson & Orth, Chicago Contractor: Northwestern Heating & Plumbing Co., Evanston, III.

For Greatest Comfort and Lowest Maintenance Cost Use POWERS Control



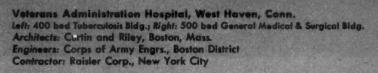


Comanche County Memorial Hospital, Lawton, Okla. Architect: Paul Harris, Chickasha, Okla. Paul H. Fesler, Hospital Consultant Engineers: Carnahan & Thompson, Oklahoma City, Okla. Contractor: Ray F. Fischer Cc.





ash.







Morristown Memorial Hospital, Morristown, N. J. Architects: John H. & Wilson C. Ely, Newark, N. J. Hospital Consultant: Gerhard Hartman, Ph. D., New York City Mechanical Engineers: Meyer, Strong & Jones, New York City Contractor: August Arace & Sons, Inc., Elizabeth, N. J.

(a75)

THE POWERS REGULATOR COMPANY

Established 1891 — Offices in Over 50 Cities — See Your Telephone Directory
GENERAL OFFICES AND FACTORY—SKOKIE, ILLINOIS





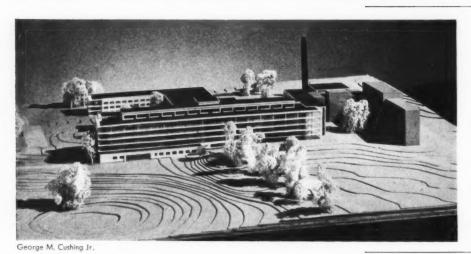
MEMORIAL LIBRARY IN BERLIN

The first American-type open-stack free library in Germany will be built in Berlin with American funds as a memorial to airmen who died in the airlift. The final design was developed from four chosen in a competition open to all architects in West Berlin and West Germany under the guidance of Francis Keally as consulting architect and Charles Mohrhardt as library consultant. The German architects whose designs were used were Gerhard Jobst, Willy Kreuer, Hartmuth Wille and Fritz Bornemann. The building, of gray Bavarian stone, will have bronze ventilation grills lighted from behind at night



"PROTECTIVE" CONSTRUCTION

The new pathology hospital to be constructed at the Army's Walter Reed Hospital in Washington will feature the first "protective" construction in the Washington area — exterior walls of reinforced concrete 12 in. thick, designed to withstand an atomic bomb blast up to half a mile away. Building will have 3,221,900 cu ft, cost \$7 million. Architects: Faulkner, Kingsbury and Stenhouse; engineer, Guy D. Panero; structural engineers, Marshall and Gongwer



HOSPITAL FOR THE INDIGENT

Coolidge, Shepley, Bulfinch and Abbott are architects for the new buildings to replace the old Springfield, Mass., Municipal Hospital, which is operated for indigent patients without charge by 70 volunteer doctors. There will be a sixstory main building containing children's rehabilitation center, operating and laboratory rooms, and two wards for 234 patients. Attached two-story building will house 204 aged patients and their own rehabilitation center



PNEUMATIC PRODUCTS PLANT

C. A. Norgren Company plant in Englewood, Colo., a suburb of Denver, is pleasantly located near a city park and has a magnificent view of the Rockies. The 60,000-sq-ft building is a steel frame structure, except for the west wall, a cavity-bearing wall with outer diaphragm of red flagstone. Elsewhere walls are curtain type to simplify future expansion. Stanley Morse, architect; Jared Morse, designer



Lifetime Flooring
-Lifetime Beauty!

Wingfoot Rubber is enduring testimony to your sound judgment

YEARS from now, this wonderfully rich, smooth, lustrous flooring will still be saying fine things about your wisdom in specifying it.

Years from now, your client will still be enjoying the like-new beauty, resiliency, comfort and quiet of this remarkable flooring.

LASTING BEAUTY—Choose from 16 attractive, durable marbleized colors that never fade or "walk off" because they are an integral part of the flooring.

DURABILITY—Goodyear's Wingfoot Rubber Flooring resists fire, stains, alcohol, inks, most acids, cigarette burns. The smooth, resilient surface defies time and wear!

EASE OF MAINTENANCE—Because dirt doesn't penetrate its surface, Wingfoot Rubber Flooring keeps its brand-new look with minimum maintenance cost.

ADAPTABILITY—Available in either continuous sheet form or 9" x 9" tile, Wingfoot Rubber is favored by architects, builders and owners for both commercial and residential installation.

AND ECONOMY! Long after conventional floorings need replacement, Goodyear's Wingfoot Rubber Flooring retains its just-installed look!

See Wingfoot Rubber, specify it at flooring dealers' and contractors'. For specification data, write to Goodyear, Flooring Dept., Akron 16, Ohio.

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Makers of VINYL. TILE Flooring

OVER 2



4950 MARINE DRIVE APARTMENT BUILDING

ARCHITECT — Dubin & Dubin, 140 North Dearborn, Chicago, Illinois.

ENGINEER — H. S. Nachman & Associates, 179 West Washington, Chicago, Illinois.

GENERAL CONTRACTOR—Peter Hamlin Construction Co., 9 South Clinton Street, Chicago, Illinois.

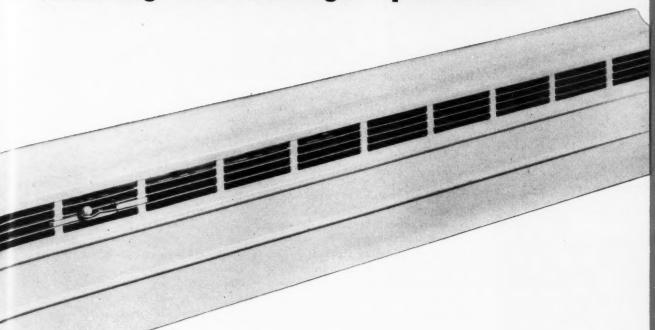
HEATING CONTRACTOR — Davis Construction Co., 18 West Kinzie, Chicago, Ill.

FEDDERS-QUIGAN CORPORATION

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Baseboard Radiation

Heating New Chicago Apartment



Men who design and build modern American housing are turning to Fedders Baseboard Radiation for efficient, economical heating.

This ultra-smart apartment building located at 4950 Marine Drive is another example of how men of the profession and the industry are providing new comfort, new cleanliness and new decor with Fedders Baseboard Radiation.

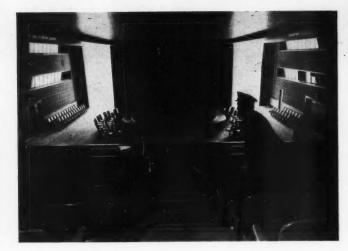
Taking the place of ordinary baseboards, Fedders Baseboard Radiation saves space, facilitates furniture arrangement and simplifies picture window installations.

Fedders Baseboard Radiation has specially designed anti-streak covers (patent applied for) which reduce cleaning and maintenance costs.

They are light in weight, easy to stock and install. They give instant response to thermostatic control thus conserving fuel by eliminating necessity to "force the fire" or open windows to cool off. Fedders representatives are located in every major city. You will find their names in your classified telephone directory.

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UNations

UNITED NATIONS CONFERENCE BUILDING OPENS



THE \$11 MILLION United Nations Conference Building was opened at the end of February and the three Council rooms shown here held major interior interest.

All three were outfitted by the Scandinavian nations. For the Security Council (above right), Arnstein Arneberg directed the decorating for Norway. Walls are done in a tapestry pattern that repeats the design of the draperies; doors are of Scandinavian pine with inlaid designs.

Sweden was the sponsor and Sven Markelius the designer for the Economic and Social Council Chamber (left above), where the treatment of the ceiling is notable for its straightforward showing of metal struts and lighting fixtures.

In the Trusteeship Council Chamber (left), Designer Finn Juhl, for Denmark, has used Danish birch in woodwork and horse-shoe-shaped tables. Walls are gray acoustical plaster; ceiling has rectangular blocks of yellow, green, rust and black, colors repeated in alternating bands on the gray rug.

Contemporary furnishings, used throughout, include chairs from England, tables from Canada, leather divans from the United States, rugs from Scotland, and woodwork from the Netherlands or the Far East.

NPA APPROVAL (Cont. from page 11)

Long-Awaited Orders Issued

Issuance of the new construction control orders on March 6 was already almost incidental in the general stream of NPA announcements loosening the reins on construction.

By the time it issued its revised CMP Regulation 6 and the new housing order, M-100, NPA had: (1) lifted the ban on 646 community projects previously denied approvals; (2) allowed completion of 186 other commercial-type projects previously halted; and (3) granted permits to 105 new commercial building projects in six metropolitan areas where building curbs under the defense program have brought about serious unemployment.

The revised edition of Regulation 6 consolidated all the controls formerly grouped under M-4A; and M-100 was the new order covering housing.

Even structural steel was favored, though not so much as carbon steel of other types, in the new orders. Selfauthorization was applied to 2300 lb of carbon steel per housing unit per quarter; and in Regulation 6 the self-authorization provision for permitted types of commercial construction was raised to five tons, including two tons of structural steel.

It was a different story for copper; but even there the housing order issued was more liberal than the original draft which drew such strong protest from the industry. The threatened bathroom limitation was entirely removed and the order permits adequate wiring facilities for new homes; the original proposal had cut close — too close, the industry insisted — to the "safe" level. Area limitations on housing likewise had been dropped.

Major drawback from builders' point of view: the new order set up a *use* limitation, instead of a *delivery* limitation, on controlled materials. That meant that whatever a builder used from his own inventory must be counted as part of his self-authorization maximum; it drew immediate protest from home builders.

HOUSING FOR SERVICEMEN: COOGAN REVIEWS PROGRAM

By Ernest Mickel

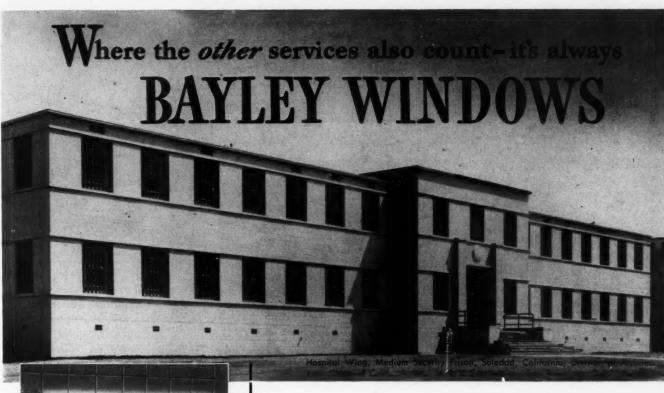
Things are not running as smoothly as they might be in the Armed Forces Housing Agency. Director Thomas P. Coogan, the Miami home builder and former president of the National Association of Home Builders, is having trouble in laying the groundwork for a solid approach to construction of adequate shelter space for U. S. servicemen.

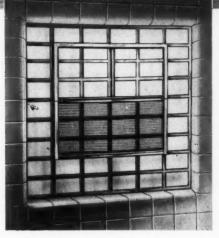
Interservice Differences

Differences in attitude of the various branches of service toward their own housing—its volume and characteristics—hinder the attempts of AFHA to develop uniform types of housing.

For example, the Air Force actually can afford better accommodations than the Navy and the Army. One of the immediate goals of the new agency is to establish in drawings and specifications a standardized house for similar grades

(Continued on page 398)





Highlights of this New Exclusive BAYLEY Product

● Safeguards against escape ● Better daylighting ● Controlled ventilation ● Large areas of clear vision ● Minimizes self injury ● Working parts concealed ● Clear glass ● GLAZ-WEDG secures glass ● Sanitary—screens removable, easy to clean ● Glass washed from inside ● Noncorrosive metals throughout ● Reduces maintenance and interference with hospital routine



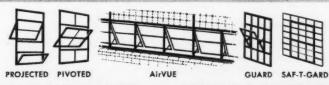
New Bayley SAF-T-GARD Window Scientifically Developed for Mental Hospitals

To be known for a fine quality product is only the *first* essential. Much more is required from a truly satisfactory relationship. Full understanding of this fact is the foundation of Bayley's policy—and why Bayley has been so widely preferred for so many years by discriminating Building Designers.

Bayley's endeavor to better serve through all the building stages—from recognition of need to building occupancy—is further exemplified in the new Bayley Saf-T-Gard Window. This window is the result of Bayley's close collaboration with Doctors and officials of mental institutions. Not only does it efficiently meet the demands of modern mental hospitals but it also incorporates construction features made possible by Bayley's years of specialized window experience.

Regardless of window requirements, you too will find extra values in discussing your needs with Bayley. Write or phone.

See Bayley in Sweet's. Complete catalogs on Aluminum Windows, 17a/BA; Steel Windows, 17b/BAL; SAF-T-GARD Hospital Detention Window, 17b/BAY.



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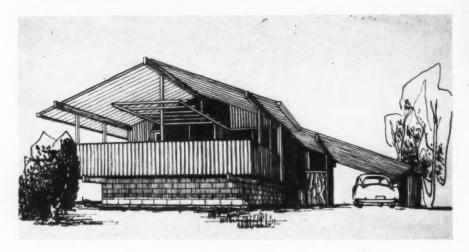
Springfield, Ofiio

Chicago 2

New York 17

Washington 16

A demonstration wood house has been designed for construction on the grounds of the Canadian International Trade Fair. Preliminary plans show a 1000-sq-ft house with living-dining room, den or guest room and two bedrooms. The design by Fred S. Brodie shown here was selected in a competition sponsored by the architectural firm of Sharp & Thompson, Berwick, Pratt, of Vancouver, who had been asked to prepare preliminary sketches. Requirements included compliance with National Housing Act provisions, use of western red cedar lumber, and approximate cost of \$12,000



NEWS FROM CANADA by John Caulfield Smith

More Steel Is Permitted For Commercial Building

Up to two tons of steel may now be used to build commercial structures of some types, according to a recent announcement by D. C. Beam, steel construction adviser to the Department of Defense Production.

Mr. Beam's announcement was made at the Toronto convention of the Canadian construction Association, and it salved a sore spot of long standing.

The C.C.A. has repeatedly pointed out that many defense and defense-supporting projects require less field labor and a lower content of other construction materials per ton of steel than is normally the case. Yet it is to these projects that the bulk of all steel available for building has been diverted. The Association has urged that restrictions be relaxed to permit worthy construction projects requiring relatively small amounts of steel to go ahead.

Some Types Excluded

The relaxation of the steel ban applies to such buildings as stores, warehouses, garages, banks, motels. Not included are amusement and recreational buildings, or buildings for the storage of tobacco, liquor or beer.

Mr. Beam stressed that the permits are merely "hunting licenses" and it is

still necessary to obtain the steel on the open market. He noted that pipe less than 4 in. in diameter has also been removed from federal control, but indicated that no further relaxations can be expected for the present.

January Building Total Off; Housing Up from Last Year

Construction contracts awarded in January came to \$151.3 million, as against \$159.1 million for the same month in 1951. Impact of winter on the building industry varies from year to year, so this five per cent drop is not considered a reliable indicator of what may lie ahead.

Analysis of award totals compiled by MacLean Building Reports Ltd. shows an extremely sharp drop in industrial work and a substantial decrease in commercial volume. Housing contracts rose 25 per cent; but the biggest gain was made in the engineering category, largely because of the letting of the Edmonton-Burnaby pipeline contract at \$82 million.

Other large jobs were the Toronto-Montreal TV relay system; railway improvements at Port aux Basques; a power station in Vancouver; factories at Thorold and Cowansville; hospitals in London and Montreal; a telephone ex-



change in Ottawa; barracks in Esquimalt; defense married quarters in Comox; and various housing projects.

Here is a summary of the MacLean report on January (in millions of dollars):

Classification		from '51	
Residential		+ 25	- 26
Commercial of	&		
Institutional	24.2	- 35	- 46
Industrial	6.2	-911	-78
Engineering	100.9	+164	+400
Totals	151.3	- 5	+ 26

Quebec Architects Elect Maurice Payette as Head

Maurice Payette of Montreal has been elected president of the Province of Quebec Association of Architects.

Other officers of the 1952 P.Q.A.A. Council are: H. Ross Wiggs, Montreal—past president; John Bland, Montreal—first vice president; Lucian Mamguy, Quebec—second vice president; E. J. Turcotte, Montreal—honorary treasurer; Henri Mercier, Montreal—honorary secretary.

Councillors are: H. A. I. Valentine, Montreal; S. A. Cyr, Montreal; Georges de Varennes, Montreal; F. J. Nobbs, Montreal; Gerard Benne, Quebec; R. C.

(Continued on page 32)

Supply Outlook

The outlook for supplies of building materials as reported in a recent survey is reported in an article that begins on page 382.

more meshes per sheet.



George Washington University's new hospital. Faulkner, Kingsbury and Stenhouse, Architects. Charles H. Tomkins Company, General Contractors.

treedom of design for the architect with Bostwick Metal Lath

 George Washington University's new \$5,000,000 hospital, designed by Faulkner, Kingsbury and Stenhouse (Washington architects), exemplifies the functional benefits of Bostwick diamond mesh metal lath and cold rolled channel. Bostwick lath, channel and expanded corner bead fit the design . . . no adjustments in dimensions were required by limitation of the lath or corner bead. Both met modern architectural requirements, providing reinforce-

ment, long life, cleanliness, and low maintenance in the finished walls.

Metal Lath has always met the structural and decorative demands of every decade. That is why Bostwick Metal Lath has always been used during the past half-century in America's fine structures.

As a pioneer in manufacturing all types of Metal Lath, casings and accessories, Bostwick will gladly help you with specification data.



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unique rendering of a time-honored trademark. It now identifies all the principal
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GOLD SEAL NAIRN LINOLEUM

presenting a distinctive symbol for a distinguished product

The Gold Seal has long been associated with certain products of Congoleum-Nairn Inc.—one of the oldest manufacturers of smooth-surface floor coverings to consistently employ trade-mark identification for the protection of its customers. In a distinctive form, this Gold Seal now unites all major Congoleum-Nairn products under one widely recognized and respected symbol of quality.

With Gold Seal Nairn Linoleum, as with the rest of the Nairn line, just a name has been added—nothing of their quality or performance has been taken away. These products will continue to be specified wherever the best in floor coverings is desired.

The Gold Seal is your
money-back guarantee of
satisfaction from the
makers of the finest floor
coverings in the world:

GOLD SEAL NAIRN LINOLEUM
GOLD SEAL ASPHALT TILE
GOLD SEAL VINYL INLAIDS

"Gold Seal" and "Nairn" are registered trade-marks. © 1952, Congoleum-Nairn Inc., Kearny, N. J.

THE RECORD REPORTS

Betts, Montreal; Alphonse Belanger, Sherbrooke; Gerald Leger, Montreal; R. E. Bolton, Montreal; and P. E. Samson, Quebec.

Active in Civic Affairs

The Association's new president has been extremely active in civic as well as professional areas. A Fellow of the Royal Architectural Institute of Canada since 1946, Mr. Payette has been a memCANADA (Continued from page 28)

ber of the City Planning Committee, the Committee on Housing and the Building Code Committee, all of Montreal.

Mr. Payette, who is equally at home in speaking French and English, was admitted to architectural practice in 1929. He has designed, alone or in partnership, a large number of residential, religious, educational, commercial and industrial buildings. He is now in practice under his own name.

Mr. Payette has been a member of the P.Q.A.A. Council since 1932 and has served as both honorary secretary and honorary treasurer.

Expect Acceptance of Building Safety Code

Acceptance of the newly drafted section on Construction Safety Measures for the revised National Building Code is now expected by officials of the Division of Building Research of the National Research Council.

Over 900 copies of the draft have been distributed across Canada. While there has been no official expression of opinion from municipal councils, Building Research spokesmen say there is reason to believe the new regulations will be acceptable, since they are comparable to those already in force "in several jurisdictions."

Comments made by municipal officials, builders and material suppliers indicate there is general agreement the provisions are appropriate for the purpose. There appears to be no conflict with similar provisions in force in various provinces under the supervision of such agencies as Workman's Compensation Boards, etc., and that no indication the enforcement of such regulations would not add to construction costs.

When it is approved, it is expected that this section of the National Building Code will be issued in separate booklet form for the use of foremen, superintendents and others.

Defense Building Under Way Totals Over \$235 Millions

Though only 18 months old, the Canadian Government's Defense Construction Ltd. has chalked up an impressive record of achievement.

During 1951 this crown company awarded contracts totaling \$183 millions; and including carryover from previous years, it is now administering over \$235 millions in 700 contracts.

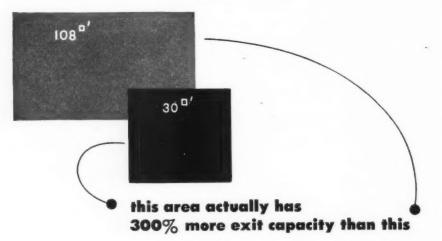
D.C.L. reports that when the fiscal year ended March 31, it had awarded in the 12-month period about \$250 millions in contracts and had spent approximately half that amount.

The carryover into the 1952-53 program will be slightly over \$100 million and contracts in the 1952 calendar year may total about \$200 million.

Double Spending Expected

Cash expenditure in the calendar year 1952 is likely to run from \$180 to \$200 millions, roughly double the expenditure

(Continued on page 34)





Architect:
"The most efficient fire escape on the market"!



Fire Chief:
"We heartily approve of the Potter Fire Escape, recommend it to anyone".

Potter's Slide Escapes may also be installed economically on the exterior of old buildings.

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next project.

108 square feet of floor area.

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Name_					

A Potter interior Spiral Escape requires only 30

square feet of floor area and will evacuate 3 times

as many people safely, under emergency condi-

tions, than a typically enclosed stairway requiring

The Potter Slide Escape listed by the Underwriters

Laboratories as standard offers, in multi-storied

buildings, the fastest means of evacuation for the

lowest initial cost and the lowest of maintenance

cost. It has no equal for the handling of hospital

Plan to incorporate this modern emergency escape,

with a 20 year record of successful use, in your

and institutional patients and school children.

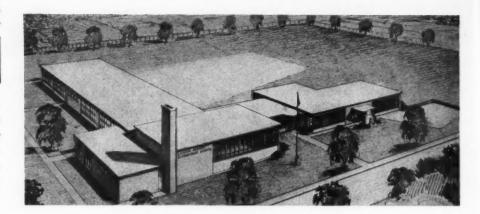


THE RECORD REPORTS

CANADA

(Continued from page 32)

Lanor Avenue Elementary School, Etobicoke, Ont., now under construction, has colored wall panels under all exterior windows. The building has nine classrooms, two kindergartens and a generalpurpose room. Architect: Gordon S. Adamson of Toronto





PENNSYLVANIA CORRUGATED GLASS

Also Manufacturers of Original CORRU-GATED Wire Glass (with wire netting encased). Use coupon below to check off the catalog for your needs. Interior design achieves striking functional styling with light-diffusing partitions and screens of Pennsylvania Corrugated Glass without wire. For home and institutional decor, sparkling, easy-to-clean Corrugated Glass provides, with amazing economy, divisional effects of simple, pleasing and utilitarian design. Commercial uses are varied—from reception and office partitions to back-bars, counter fronts and illuminated fountain centers. There is no end to the flexible design of Corrugated Glass and its advantages for inviting more and better business. There is no better way to let in light without sight. You specify minimum maintenance, easy installation, and lifetime beauty when you include Corrugated Glass without wire for redecoration, and new room



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REPRESENTATIVES IN PRINCIPAL CITIES

WORKING F	ON FACILITIES FO OR DEFENSE PRO ENTILATOR CATA	DUCTION	METAL
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CITY	ZONE	STATE	

DEFENSE BUILDING (Continued)

on direct defense construction in 1951.

There are three classes of construction for which this money pays. Class I consists of permanent buildings of solid masonry at long-established naval, military and air force bases, camps and naval stations. Class II is made up of buildings having a structural steel or concrete frame with wooden partitions and outside walls. Class III refers to structures which are entirely wooden, except for concrete foundations and ground floor.

Private Firms Employed

A feature of the defense building program is its employment of private architectural and consulting engineering firms.

In the early stages of the program, much of the designing was carried out by consultants in Ontario and Quebec. This was done because of their proximity to defense headquarters and the necessity for close liaison in the design of standard buildings, whose construction was to be started as quickly as possible and repeated from coast to coast.

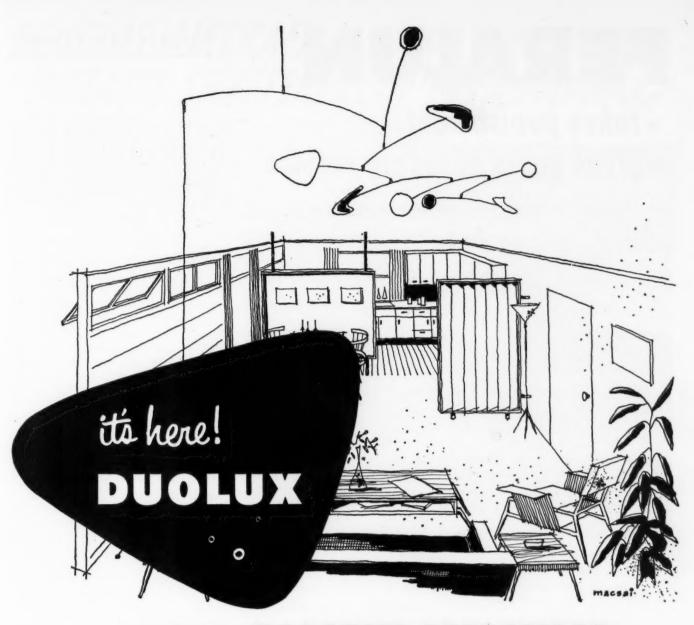
As the program got under way, however, every effort was made to employ consultants in all regions of the country. Central Mortgage & Housing Corp. usually supervises construction in the field, but in the case of special buildings the knowledge of the consultant is of particular importance. Then he is employed on supervision.

Firm Bids Preferred

In addition to supervising defense construction projects, C.M.H.C. acts as agent for the calling of tenders. Preference is given to contractors and suppliers quoting on a firm basis.

"It would appear that insistence on firm prices by general and subcontractors is in many cases a matter of per-

(Continued on page 36)



a new MASONITE PRESDWOOD

smooth on both sides!

BETTER HARDBOARDS FOR BETTER LIVING

Dozens of Applications!

In Homes, new or remodeled. Cabinets, flush doors,
partitions, dividers, curtain walls, valances, etc.

In Stores. All types of fixtures, partitions, curtain walls, valances, room settings, cut-outs and displays.

In Institutions. Flush doors, partitions, cabinets, curtain walls, valances, all types of built-in equipment.

In Factories. Partitions, cabinets, bin dividers, time-card racks, office decor, etc.

DUOLUX—Wherever you want to see both sides!

Now! New help for you in working out design problems.

With Masonite Duolux you can specify a strong, rigid, durable panel material that's smooth on both sides!

And it's really smooth! Its glass-like surface takes beautifully smooth finishes in paint, ename!, lacquer and other materials.

Building materials dealers everywhere now carry this new member of the Masonite Presdwood® family. Use Standard Duolux for normal interior applications. Whenever exposure to high humidity or heavy surface wear is expected, and for all exterior purposes, specify Tempered Duolux. Both available in 1/8" and 1/16" thicknesses.

For more information about any of the 23 types and thicknesses of all-wood Masonite Presdwood, write:



MASONITE® CORPORATION

"Masonite" signifies that Masonite Corporation is the source of the product.

DEPT. AR-4, BOX 777, CHICAGO 90, ILL.

FERALUN

- takes punishment
- gives years of safety service



AB 107

Yes, Feralun treads, floor plates and thresholds take the pounding of heavy traffic in stride because this economical flooring material is cast to last! No matter where you put Feralun—on stairs, steps, walkways or ramps—it assures two-fold benefits:

- 1 It protects against slips and falls.
- 2 It keeps doing this vital safety job for the life of the building.

Reason? Feralun consists of a special cast iron matrix with a diamond-hard abrasive imbedded in the walking surface.

Gripping action is provided by the abrasive, not by the scoring or indentations in the metal. • Get the full story on Feralun. Find out why millions of feet of this long-lasting anti-slip flooring are now in use.



AMERICAN Safety Floorings

AMERICAN ABRASIVE METALS CO. 460 COIT STREET, IRVINGTON 11, NEW JERSEY

THE RECORD REPORTS

CANADA

(Continued from page 34)

sistent effort," says D.C.L. President R. G. Johnson. "An escalator clause is an easy answer; but experience indicates that firm prices can be obtained when a real effort is made."

Ontario City Plans to Build Big Downtown Parking Garage

It looks as though London, Ont., a city of 120,000, will beat its larger colleagues to the draw in providing downtown parking facilities.

Plans are well advanced for erection of a \$2 million, two-and-a-quarter-acre market and parking garage to replace the city's present Covent Garden and open-air public market. Architect is Victor J. Blackwell, London.

The capacity of the garage will be 2200 passenger cars. Some concept of the size of this structure may be gained from the fact that it has very nearly the combined capacity of *all* public parking garages in the city of Toronto.

Design Kept Simple

The building is to be of simplest possible design, and will be constructed of reinforced concrete.

The glass-fronted market area is on the ground floor. Parking floors are above, alternately arranged in bays five and six stories in height. This staggering of floor levels permits maximum use of space, both in relationship to the ramps and the storage of the cars themselves: the front ends of cars on a higher floor project over the trunks of those on the floor below.

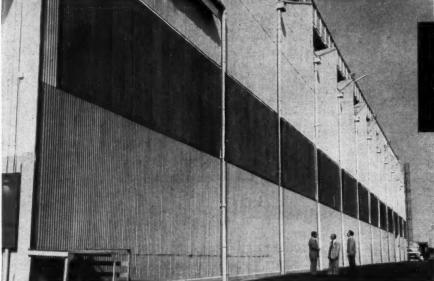
Sides of the building are left open, with protection provided by low para-

Shift in Building Emphasis Reflected in 3-Year Totals

How much the construction picture has changed as the nation presses its defense program is demonstrated by a table showing percentage comparisons by categories of building for the last three years.

Category	1951	1950	1949
Residential	19.0	35.5	40.7
Commercial	23.9	28.9	28.4
Industrial	19.7	9.2	9.1
Engineering	37.4	26.4	21.8

DOUGLAS AIRCRAFT INSTALLS SHATTERPROOF Alsyntte



SIDEWALL INSTALLATION at Douglas Aircraft Plant, El Segundo, Calif.—corrugated metal siding was removed and replaced with Alsynite panels. No additional framing required. Lapjoints sealed with mastic. Light diffusion throughout interior greatly increased due to refractive action of Alsynite.



ALSYNITE DECORATIVE PARTITION is shown above. Alsynite has unlimited possibilities for practical use in homes, offices, stores, as well as for industrial "daylighting."

TRANSLUCENT

GLASS FIBER PANELS

Corrugated and flat panels.

Seven colors for decorative uses.

The sensational new material for shatterproof skylights, windows, walls and partitions

Costs less to install!
Cuts lighting costs!

Easy to install in existing buildings as well as in new construction.

ALSYNITE MAKES new and unlimited daylighting possible for buildings of all types. Alsynite is a new kind of structural glass made by combining glass fiber with resin. It is shatterproof, permanent and feather-light (8 oz. per sq. ft.). It can be sawed, nailed, drilled ... installs exactly like corrugated metal. Like patterned glass, Alsynite lets the light through but can't be seen through. It has a higher light diffusion factor. Corrugated Alsynite nests with all standard corrugated roofing and siding. Flat Alsynite substitutes for glass in standard windows. Now let daylight in wherever you want it with shatterproof Alsynite. Plants in California and Ohio.



ALSYNITE COMPANY OF AMERICA Dept. A, 4670 De Soto St., San Diego, Cal. Please send free sample of Alsynite with complete info. & name of nearest distributor.

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ADDRESS	
CITY	STATE
DISTRIBUTORS II	PRINCIPAL CITIES

Operation Trade Secrets in session in Washington: Wallace E. Johnson, Memphis, Tenn.; Frank Burns, Denver, Colo.; Andrew Place, South Bend, Ind.; Leonard G. Haeger, N.A.H.B.; Richard G. Hughes, Pampa, Tex.; W. Hamilton Crawford, Baton Rouge, La.; and C. W. Smith, Southwest Research Institute, San Antonio. Object of all eyes is Mr. Place's central plumbing stack for multiple tie-ins





SECURITY Uni-Bilt DUMBWAITER DOOR UNITS

... vastly different from other makes—Security Door Units are doing a smoother, quieter, better job for America's most progressive hospitals and restaurants.

Although frequently overlooked, proper construction and design of Door Entrance Units is essential to any Dumbwaiter, trayveyor, or subveyor installation. No part receives more wear or is subject to as much damage or abuse.

Factory-assembled as a complete door with frame and trim as a unit,



For over 30 years Security has specialized in, developed, and built unsurpassed Dumbwaiter and Freight Elevator Door Entrance Units

A FEW OF THE MANY HOSPITALS USING SECURITY UNITS

St. John's, Detroit • Cedars of Lebanon, Los Angeles • Blodgett, Grand Rapids • U. of Cal., Moffitt Hospital, San Francisco • Good Samaritan, Los Angeles

Counter Door Units at F. W. Woolworth's largest store in Houston are typical of Security installations in Woolworth stores throughout the country.

S. H. Kresge, Sears Roebuck and W. T. Grant are other chains that have many Security installations. Write for Catalog Security Fire Door Co.
3047 LAMBDIN AVE., ST. LOUIS 15, MO.

Better Homes for Less Money: Trade Tips at N.A.H.B. Parley

THE ARCHITECT and the home builder continue to join hands in the effort to provide the buying public with better and less costly housing.

This mutual effort finds its latest public expression in what the National Association of Home Builders has termed its "Operation Trade Secrets."

The project is an attempt on the part of the industry to give John Public a better house for less money.

The reasoning is simple: if one builder develops a better way of incorporating a product into his units, or finds a better plan for his houses, sharing the information with other tradesmen will broaden the field for all.

Field Sessions Inaugurated

So last year the N.A.H.B. decided to share members' interests in a big way. A series of field meetings were held under (Continued on page 314)



A jovial group at Washington session of Operation Trade Secrets: Sen. A. S. (''Mike'') Monroney (D-Okla.); Raymond M. Foley, Housing and Home Finance Agency administrator; N.A.H.B. President Alan E. Brockbank; Sen. Robert S. Kerr (D-Okla.); Emanuel Spiegel, New Brunswick, N. J., N.A.H.B. first v.p.

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Adlake

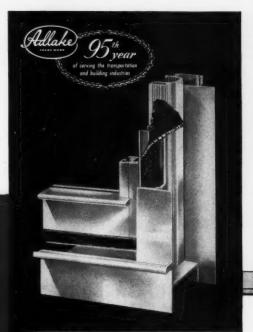
aluminum windows

offer these two
weather-protection
features:

- 1. woven pile weather stripping
- 2. serrated guides

When you install ADLAKE Aluminum Windows, you can count on a perfect weather seal. Wind, rain and cold drafts are baffled by ADLAKE's exclusive combination of snug woven-pile weather stripping and patented serrated guides—and this protection, together with ADLAKE's famous finger-tip control, will last through the entire life of the building!

Because they eliminate all maintenance costs, and keep their beauty and efficient operation with only routine washing, ADLAKE Aluminum Windows ultimately pay for themselves! Yes, for economy... for performance... for





lasting good looks . . . ADLAKE Windows set the standards, in both replacement and original installations.

Get the whole story on ADLAKE's advantages today! ADLAKE Representatives are in most large cities.

ADLAKE ALUMINUM WINDOWS GIVE YOU ALL THESE "PLUS" FEATURES, TOO:

Minimum Air Infiltration • Finger-tip Control • No Warp, Rot, Rattle or Stick • Ease of Installation No Painting or Maintenance

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PLAN FOR TOMORROW



BEFORE

Sun-struck Windows of Lockheed Aircraft Corporation's Burbank, California plant created eyestraining glare, allowed heat rays to penetrate glass, caused uncomfortably high inside temperatures. Appearance of building exteriors was spoiled by unevenly adjusted blinds and the open and closed windows.



AFTER

Kaiser Aluminum Shade Screen now covers 10,000 square feet of windows on 7 buildings of the Lockheed plant. Thousands of tiny louvers deflect hot rays before they hit glass. Result: Glare eliminated. Interiors up to 15% cooler, more comfortable for work. Exteriors dramatically improved by uniformity of windows—emphasis of modern, horizontal lines.

WITH ALUMINUM

THERE'LL BE plenty of aluminum available for tomorrow's building requirements as a result of today's industry-wide expansion.

Kaiser Aluminum alone is building new facilities which will increase its pre-Korea production of primary aluminum by 132 per cent!

So make your plans now to utilize the many advantages of light, strong, corrosion-resistant aluminum.

Check Before You Substitute

Most Kaiser Aluminum today goes to help meet the needs of the national security program. That's why it is not always readily available.

However, before you specify less-satisfactory substitute materials, ask for Kaiser Aluminum.

You may still be able to give your clients the best-Aluminum!

A Few of Today's Modern Aluminum Applications

Building materials made of Kaiser Aluminum offer exclusive advantages in design, beauty, and quality. Shown here are a few recent applications that prove aluminum is your best building material for tomorrow's plans.

Write for Information

Write for full information about any Kaiser Aluminum building product—and for AIA files. Kaiser Aluminum offices in principal cities. Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, California.

Kaiser Aluminum

Building materials for home, farm and industry



Kaiser Aluminum Siding, ideal for building or remodeling, gives sparkling modern look to Malley's Candy Shop, Cleveland. Weatherproof, rotproof, rust-proof, aluminum siding lasts for generations. Bakedon enamel coat gives smooth surface that looks better, is easy to clean. Designed and erected by Lumi Land Distributing Co., Rocky River, Ohio.



Kaiser Aluminum Roofing on these Liggett & Myers tobacco warehouses is strong, solid corrugated aluminum. Bright surface reflects sun's rays—helps maintain uniform inside temperatures, often so important in warehousing goods. Specified by owner W. O. Crombie of Paris, Ky., because of aluminum's "complete lack of maintenance requirements."



Kaiser Aluminum Ductwork used in Los Angeles Times Building was fabricated right on the job, eliminating costly handling, trucking, storing of bulky pre-assembled sections. Easily fastened with rivets, by welding, or with sheet metal screws. Installed faster with less worker fatigue. And uninsulated aluminum delivers as much heat as insulated galvanized material at lower cost.

THE RECORD REPORTS

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926-1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

ATLANTA

	Residential Brick Frame		Apts., Hotels Office	Factory Bldgs.				Apts., Hotels Office	Commercial and Factory Bldgs.	
Period			Bldgs. Brick and Concr.	Brick and Concr.	Brick and Steel	Residential Brick Frame		Bldgs. Brick and Concr.	Brick and Concr.	Brick and Steel
1925	121.5	122.8	111.4	113.3	110.3	86.4	85.0	88.6	92.5	83.4
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	98.5	97.5
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8	177.5
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7	185.0
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8	205.0
Nov. 1951	274.4	272.5	264.9	266.6	263.8	214.6	216.4	206.6	204.7	208.3
Dec. 1951	274.4	272.5	264.9	266.6	263.8	216.1	219.0	207.9	205.0	208.9
Jan. 1952	278.5	275,3	270.3	274.2	270.0	217.5	219.8	210.1	208.1	211.5
Jan. 1952	125.5	124.9	increase over 1	939	107.5	152.0	164.5	increase over 1	939 113.7	123.3

ST. LOUIS

SAN FRANCISCO

Jan. 1952	132.4	136.4	ncrease over 105.0	1939 104.0	103.5	134.8	% is	ncrease over 106.6	1939 101.3	111.0
Jan. 1952	256.1	252.9	241.9	244.4	242.2	248.0	242.7	242.6	245.4	245.8
Dec. 1951	255.4	252.0	241.8	244.3	242.0	246.9	241.3	242.4	245.3	245.5
Nov. 1951	255.6	252.4	241.3	243.9	241.6	248.5	243.5	242.1	244.9	245.5
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1925	118.6	118.4	116.3	118.1	114.4	91.0	86.5	99.5	102.1	98.0

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.: index for city A = 110

index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

110-95 = 0.158

95

Conversely: costs in B are approximately 14 per cent lower than in A.

110-95 = 0.136

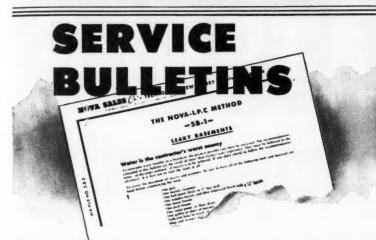
110

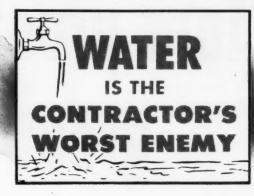
Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

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• These Bulletins are designed to give practical help on the water problems that constantly confront the Architect and the Contractor. Each incorporates more than 20 years' experience, research and constant field testing. Both the Architect and the Contractor — in specifying and in application — will find that the results achieved are effective, economical and lasting. Nova-I.P.C Products and Methods, plus trained supervisory personnel, offer you a practical means of solving the problems listed.

The coupon affords a convenient way to secure any or all of the Service Bulletins — without obligation. We welcome the opportunity to discuss with you, personally, any of the problems listed and to work with you on any current problems.

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- (SB-4) When to trowel
- (SB-5) Floor coverings on concrete slabs
- (SB-6) Condensation in concrete slabs on grade
- (SB-7) Basement footings, walls and floors
- (SB-8) Nova-I.P.C Admix
- (SB-9) Relieving joints

- (SB-10) Exterior masonry coatings
- (SB-11) Novacrete Masonry Paint
- (SB-12) Approximate quantities of materials required per 100 Sq. Ft. of various thickness slabs
- (SB-13) Portland Cement, plaster, stucco, floor topping and mortar proportions
- (SB-14) How to find areas and capacities
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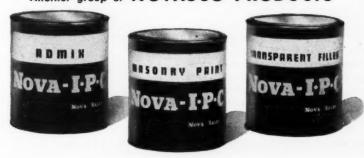


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 □ SB-15
 □ SB-16
 □ SB-17
 □ All 17

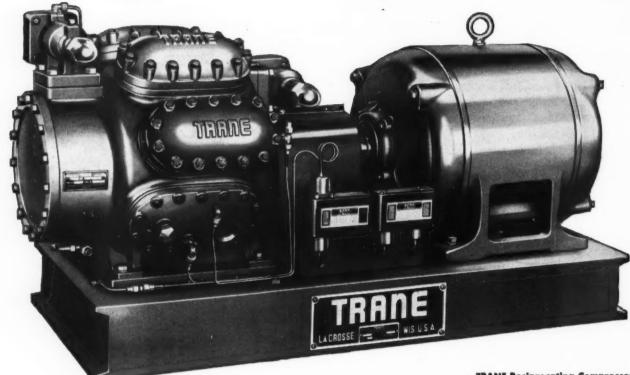
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More proof TRANE great reciprocating



TRANE Reciprocating Compressor

Complete air conditioning from a single, easy-to-install TRANE unit

A MARVEL IN COMPACTNESS!

TRANE SELF-CONTAINED AIR CONDITIONER. Here's a year-round air conditioning unit that takes a minimum of space for the job it performs - a boon for stores, restaurants, offices.

From 3- to 20-ton sizes, with built-in evaporative condenser optional in 15and 20-ton models. Easy to install. Heating coil optional. For more information see Trane Bulletin DS-362 and 362-A.

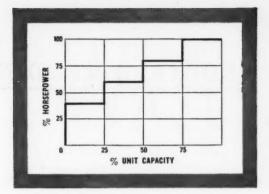


makes a compressor!

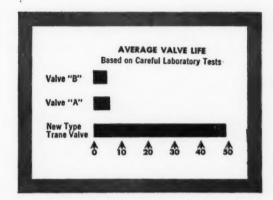
More evidence appears daily that the new Trane Reciprocating Compressor is living up to the greatest expectations. You want modern design—Trane Reciprocating Compressor delivers it! You must have efficient performance—Trane delivers it! You expect long life, quieter operation, simplified installation and maintenance—Trane has delivered that teo, on the line!

No other compressor offers all these features!

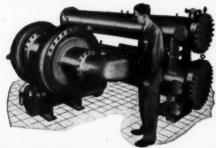
- UNLOADED STARTING . . . permits use of normal torque motor.
- FOAM BREAKER... reduces loss of oil from crankcase when oil foams from start-up.
- OIL PRESSURE PROTECTION SWITCH provides a second guard against lubrication failure.
- QUIETER OPERATION because of dynamically balanced construction and direct drive.
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- MODERN DESIGN with two piston sizes, 2, 4 and 6 cylinders, 10- to 50-ton capacity. Available with shell-and-tube condenser above compressor.
- smoother operation because of carefully balanced lightweight aluminum pistons and connecting rods.



PROOF: More Power Saving When Loads are Reduced! TRANE hydraulic cylinder unloader reduces horsepower when cooling load is reduced. It's completely automatic and internal—suction pressure controlled, oil pressure actuated.



PROOF: More Hours of Operation from Valves! That's because TRANE ring plate valves have a special surface treatment for long life. Tests prove TRANE valves have up to 8 times the life of other valves tested under the same conditions.



TRANE Centravac. A complete water-chilling system, hermetically sealed. Capacities as low as 45 tons! Power consumption very closely proportionate to load through entire range. Saves power. Saves money. Trane Bulletin DS-399 provides complete data.

For FULL INFORMATION about the TRANE Reciprocating Compressor and these other great TRANE refrigeration products, contact the TRANE representative in your area, or write the main office, La Crosse, Wisconsin.



MANUFACTURING ENGINEERS OF HEATING, VENTILATING
AND AIR CONDITIONING EQUIPMENT

HOUSING

Two-Thirds of A Nation. A Housing Program. By Nathan Straus. Alfred A. Knopf (501 Madison Ave., New York, N. Y.), 1952. 5½ by 8½ in. 291 pp. \$4.00.

REVIEWED BY ELISABETH COIT, A.I.A.

Nathan Straus, first administrator of the United States Housing Authority and long a dedicated friend of economical shelter, follows the seven myths of HOUSING with a book of broader scope. The former volume focused on public housing; the present one serves as well the income group that needs help short of subsidy: families who have been forced to buy when it might have been wiser to rent, who have been offered shoddy, ill-planned houses, and who have been subject to misleading advice. Advertised monthly financing payments, priced apparently for their benefit, rarely have included costs of utilities and maintenance that might add as much as forty-five per cent to the obligation.

The work proposes several corrective measures: one is Connecticut's venture into the moderate-rental field, using short-term, low-cost state financing. Middle-income families approved by the state may buy state-approved houses, borrowing low-interest state housing funds through local banks. Rental housing for families above the subsidized range may be sponsored by local authorities using state loans. The "Straus Plan" would use municipal credit to acquire capital by selling local housing authority bonds, two-thirds of which would be secured by a mortgage lien on the project, amortized by the rent roll. The remaining third would be guaranteed by the city, covered by a special tax, which, however, would normally not be collected after the first year, Mr. Straus believes, since rents would pay yearly charges. Some features of this plan were used by the New York City Housing Authority for its unsubsidized program of 1948-1950. A third hope for moderately-priced homes lies in cooperative housing ventures. These should be aided by informed technical and administrative guidance, by low-cost financing and by local cooperation in site selection, utility provision and basic design data. A small grant from a philanthropic foundation establishing a guiding central bureau would approach the help that Sweden and Denmark, for example, have given to their successful cooperatives.

Other chapters on government-aided housing give us facts, philosophy and forecast, together with a discussion of urban redevelopment schemes and their effect on low- and modest-rental housing. Special assignments are contributed by guest authors. Eric L. Bird, editor of the Journal of the R.I.B.A., writes of British policies and accomplishments, including aid to middle-income families. Chester Bowles charts the state's responsibilities working with federal and city agencies. Charles Abrams' chapter on segregation in housing traces its background and analyzes present tendencies and future opportunities that a federal program can offer to dissolve enforced segregation. Mr. Abrams also points out how housing shortages encourage segregation. Lee F. Johnson supplies a useful account of the Housing Act of 1949 and its possible effect on communities. In addition, the author supports his well-organized text with quotations from many other authorities.

There are two appendixes to the book. One, by William C. Vladeck, describes the use of a housing-rent chart for quick analysis of the relation of land cost, density and other factors to rentals. The other (from notes of Raymond Unwin) treats of land values and densities.

Perhaps the work's most likable quality is its candor about sore subjects—real estate lobbying against aided housing, canned anti-housing propaganda distributed country-wide, brazenly inaccurate claims of speculative builders, and the double standard of criticism

given to private and public construction. Mr. Straus feels that FHA has been converted to a mechanism for providing high-rent housing and fantastic profits for speculative builders.

TWO-THIRDS OF A NATION will be sought by anyone who wants to know about advances in urban redevelopment and housing, both British and American. The few charts, tables and illustrations add to the text. The volume is well documented, and there is a full index.

SIR CHRISTOPHER WREN

Wren: His Work and Times, By John Lindsey. Philosophical Library, Inc. (15 E. 40th St., New York 16, N.Y.), 1952. 5½ by 8½ in. 256 pp., illus. \$6.00.

As more than two-thirds of this book is devoted to a discussion of the historical background surrounding Sir Christopher Wren, the "Work" and "Times" order of importance in the title might well be reversed.

If, like this reviewer, one likes to refresh his college history courses, he should find this book most enjoyable. If, on the other hand, a detailed explanation of Wren's work is sought, I am afraid that its contents might prove disappointing. A better or more accurate title would undoubtedly improve the book's popular appeal.

Mr. Lindsey's main interest appears to be in Wren as a man. As a consequence it is apparent that the author has done much constructive research on affairs of state that had a great influence on Wren's work. While all this is educational, and it is fascinating to follow the development of Wren's interest in mathematics to a compelling absorption in architecture as Surveyor-General to the Crown, one does wish that the author had covered Wren's techniques, methods and architecture in the same thorough manner.

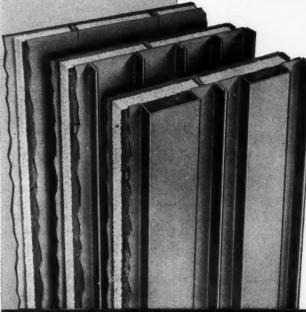
In the pages of this book one meets again with Charles II, Pepys, Evelyn and Grinling Gibbons, not to mention those less scrupulous dealers in archi-

(Reviews continued on page 48)

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REQUIRED READING

(Reviews continued from page 46)

tecture that include Mr. Barebone. Over all of these men falls the shadow of St. Paul's, for its history and shape are inseparable from the period and the leading figures of the time.

If one is planning to visit any of the fifty-two city churches designed by Wren, or is simply interested in his work and the period in which he lived, this book should be of interest.

"THAT THE PRESENT MAY LEARN FROM THE PAST"

Willow Run: A Study of Industrialization and Cultural Inadequacy. By Lowell J. Carr and James E. Stermer. Harper & Brothers (49 East 33d Street, New York, N.Y.), 1952. 5½ by 8½ in. 406 pp. \$5.00.

This investigation of a sociological disaster should scare the wits out of anyone involved in industrial expansion in this latter day of defense mobilization. What happened at Willow Run from 1941 to 1945 can happen this year or the next or the next in practically any "decentralized" industrial area.

What happened at Willow Run was that the world's largest bomber plant, set up in the open fields near a quiet village, attracted tens of thousands of workers but made no provision for their housing or community needs until the plant had been in operation over a year. While plant operators, the U.A.W., the government housing authorities, and local real estate people and builders argued among themselves, the workers and their families crowded into trailers, shanties, and even tents. Housing, schools, and shopping centers finally arrived, but were never adequate to meet the social problem. Ironically, designs for an integrated community were completed by the architectural faculty at the University of Michigan, but, the authors note, "no one was interested."

Professors Carr and Stermer, both well known sociologists, actually worked at the plant while gathering material for this study. Their conclusions are supported by their own diaries, those of trailer dwellers and office workers, and many other convincing human interest anecdotes, as well as graphs, charts, tables, statistics, and photographs.

No smug hindsight solution is offered for the Willow Run problem. The authors place the blame with no particular individuals or groups. "The social fiasco

(Reviews continued on page 415)

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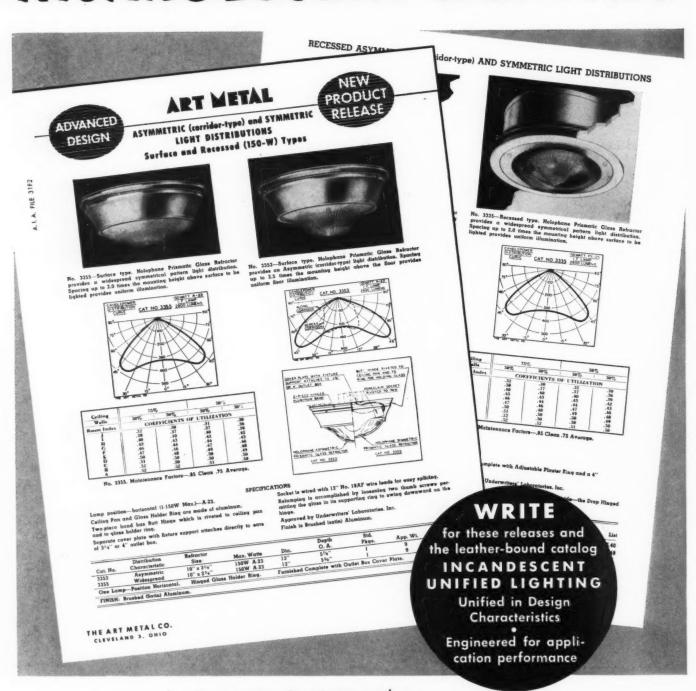
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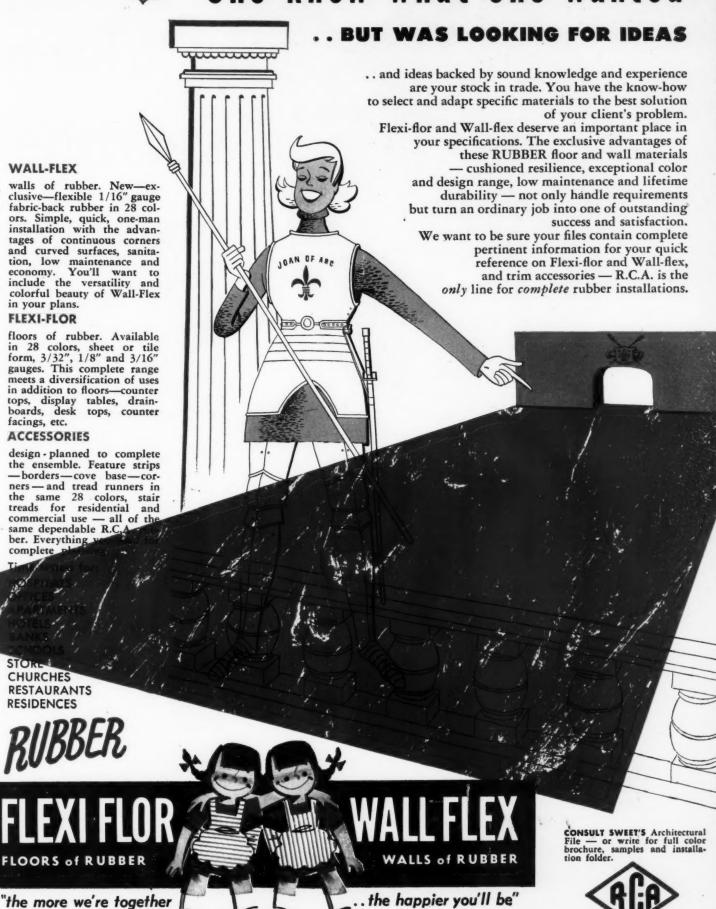
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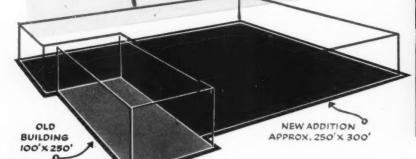


In Cleveland

Below, you see how a plant built with Stainless Steel wall panels was enlarged to several times its original size. The photograph shows the partially completed addition with panels removed from the original structure being reused. The photograph above three being reused. The photograph above shows work in progress. Owner: The E. F. Hauserman Company. Hauserman Company.

In Pittsburgh

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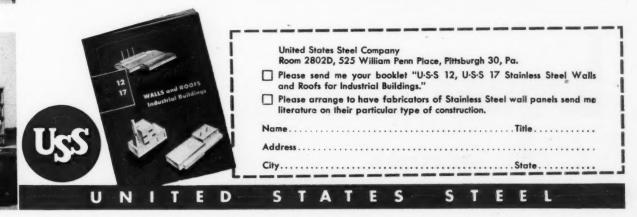
F. Hauserman Company in Cleveland, Ohio. Here a building constructed with Stainless Steel walls was enlarged by removing panels, adding a wing larger than the original structure and then using both the old panels and additional new ones to enclose the new wing.

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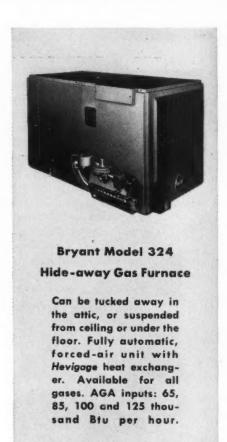




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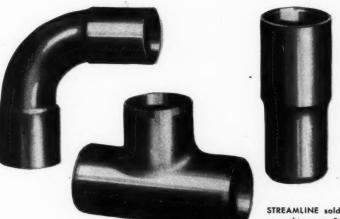


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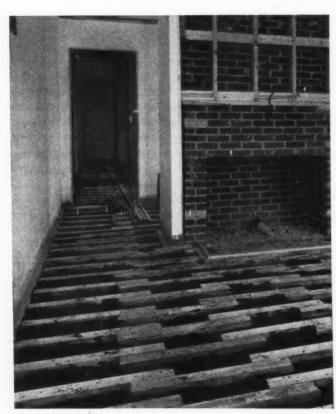
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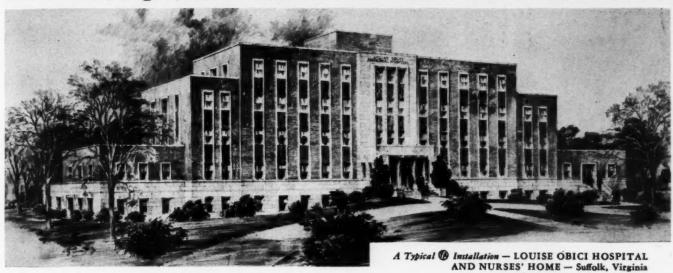
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CHURCH OF ST. ALICE, Upper Darby, Pa.

Architect: Henry D. Dagit & Sons

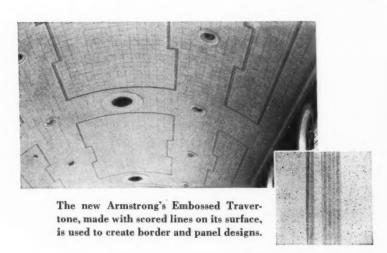
General Contractor: McCloskey & Company

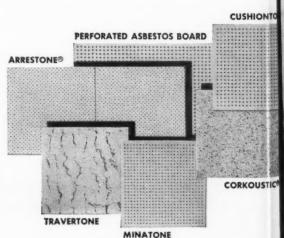
Acoustical Contractor: Berger Acoustical Company

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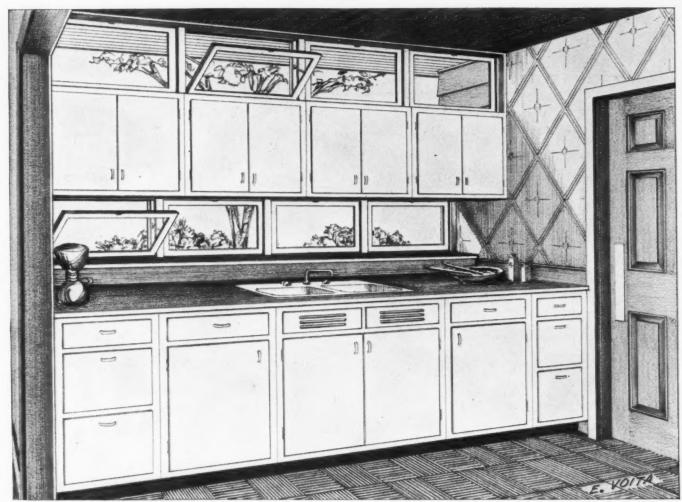
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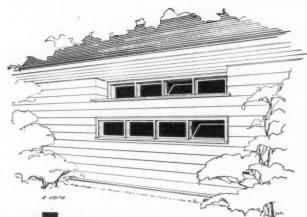
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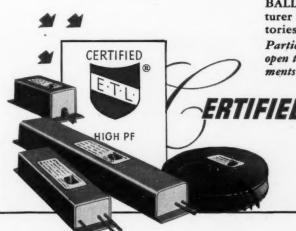


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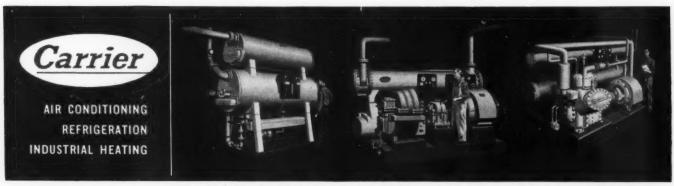
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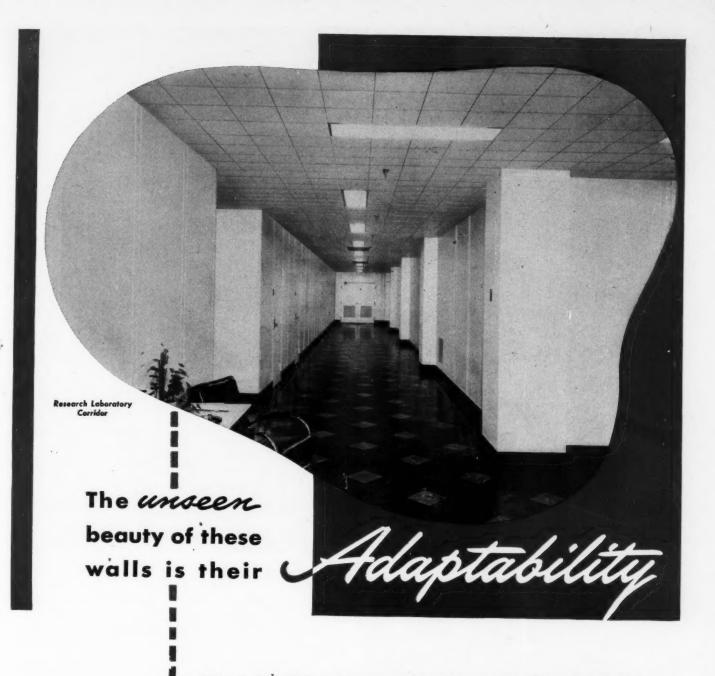
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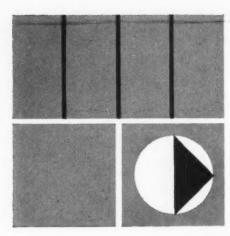
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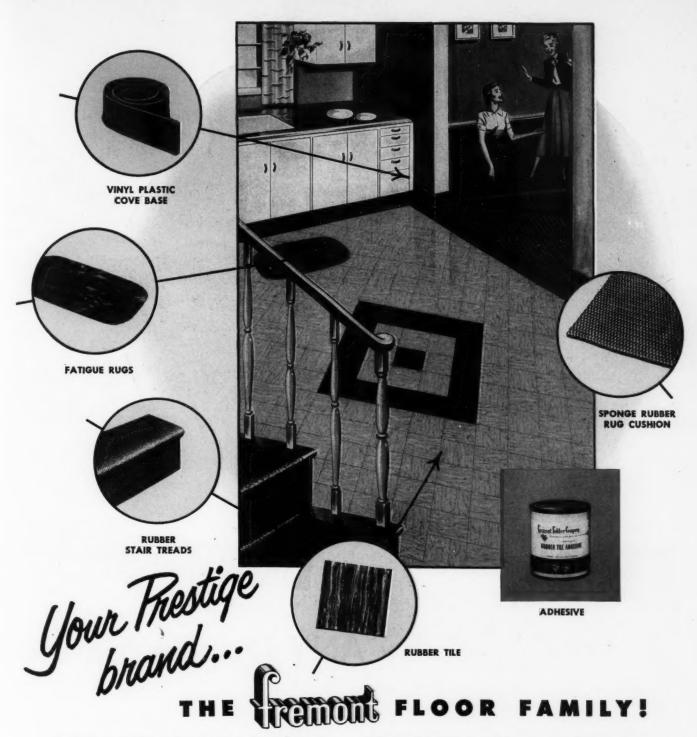
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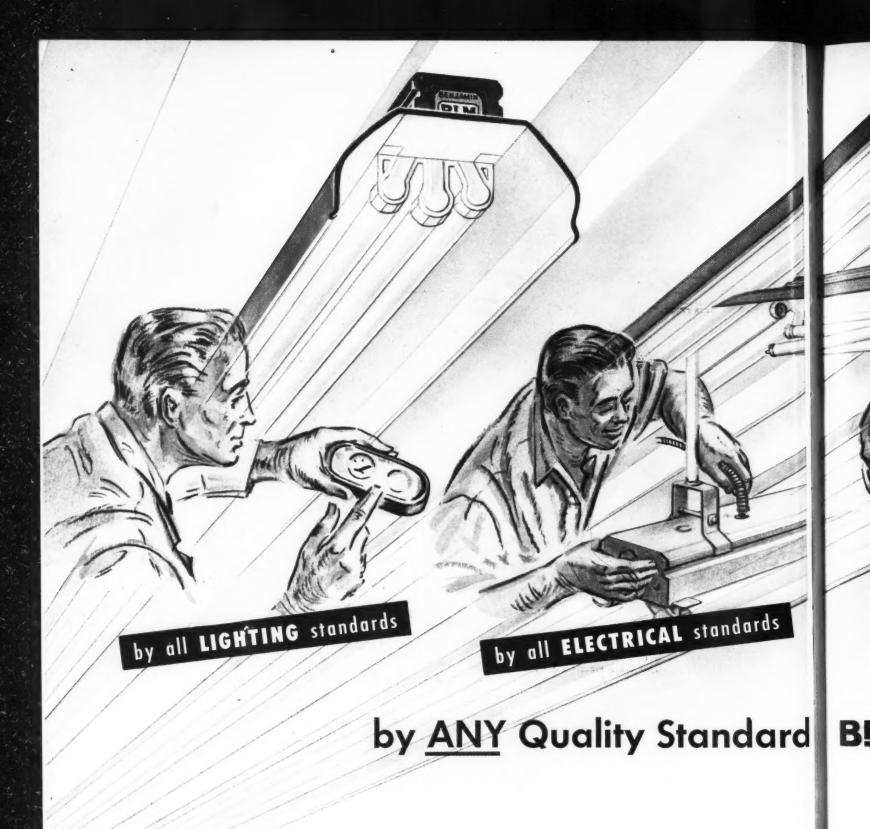
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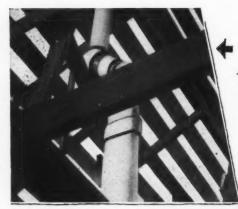
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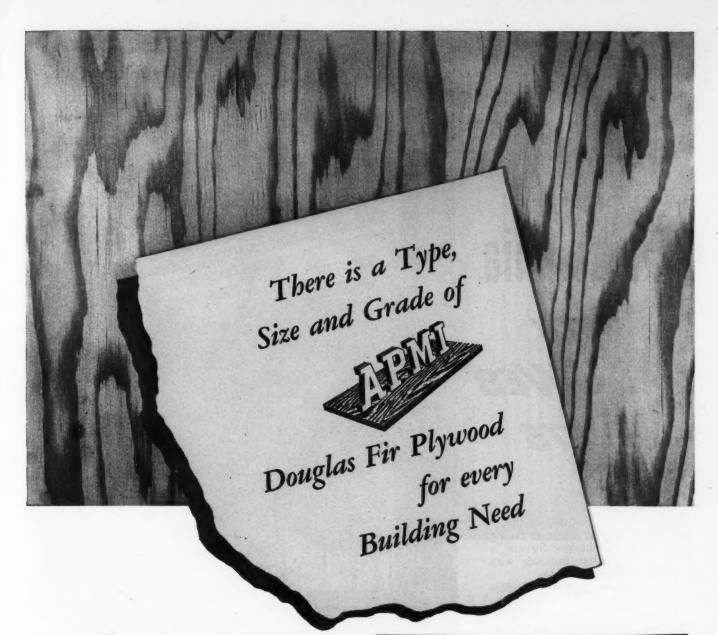
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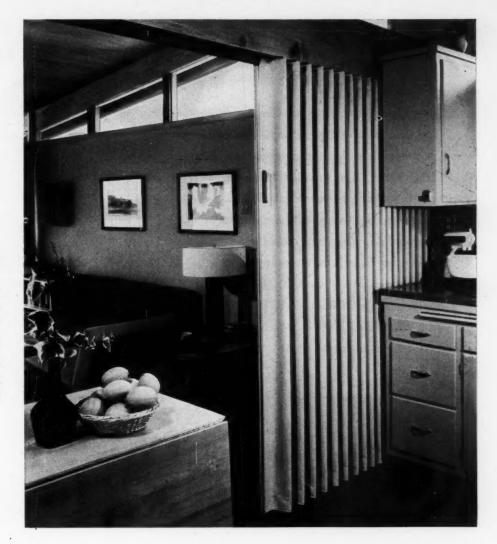
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BETHLEHEM OPEN-WEB JOISTS





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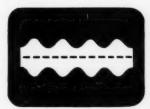
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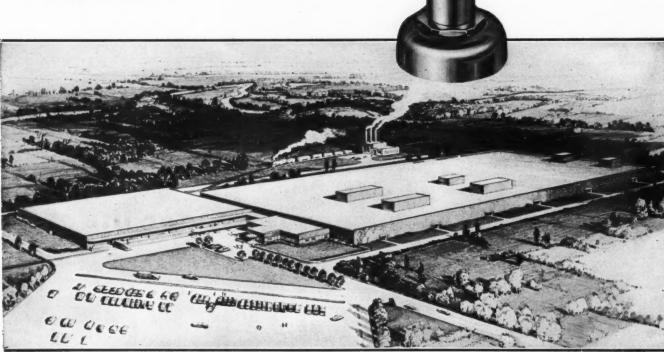
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cotton mill, equipped throughout with DELANY
FLUSH VALVES, as specified by the architects and
engineers. Combining 14 acres of plant under a single
roof, fine quality goods will be produced in
uninterrupted flow from bale cotton to finished sheets
and pillow cases. Equally uninterrupted will be the
flawless operation of the COYNE & DELANY
diaphragm type FLUSH VALVES and
VACUUM BREAKERS—unmatched in design
and virtually maintenance free.



UTICA & MOHAWK COTTON MILLS Division of J. P. Stevens & Co., Inc. Clemson, South Carolina LOCKWOOD GREENE ENGINEERS, INC. architects & engineers
DANIEL CONSTRUCTION CO. contractor
STEWART SUPPLY CO. wholesale distributor



For those who have lived with COYNE & DELANY there is no other valve. Shown at left is a deciding factor—the interior working assembly of a DELANY valve Only six working parts comprise this assembly—less than any other valve offers today. Removing the valve cover immediately identifies any source of difficulty, and replacements, if necessary, are accomplished inexpensively, instantaneously—and infrequently.

COYNE & DELANY CO. • 834 KENT AVE. • BROOKLYN, NEW YORK

Since 1879





Lord & Taylor's Suburban Store, Millburn, New Jersey

Designers: The Raymond Loewy Corporation

"From the viewpoint of the building designer, canvas is another of the adaptable materials which can be integrated into a total design to provide color, texture, grace.

grated into a total design to provide color, texture, grace. As I use it, canvas is not seasonal or demountable; it is part of the architecture. Although alternate materials may seem to have greater durability, I doubt if canvas can be matched for economy. Primarily, I like the variety of applications it allows me and the fact that it introduces a note of lightness, delicacy to offset the weight of a building mass."

William T. Snaith, President The Raymond Loewy Corporation



modern design and Canvas

Among the materials which help contemporary architecture achieve its purpose of combining function with beauty, none can match CANVAS in providing maximum design flexibility. Awning fabrics lend color and texture to both interiors and outer features, permit greater freedom in the use of glass by economically solving problems of solar heat control.

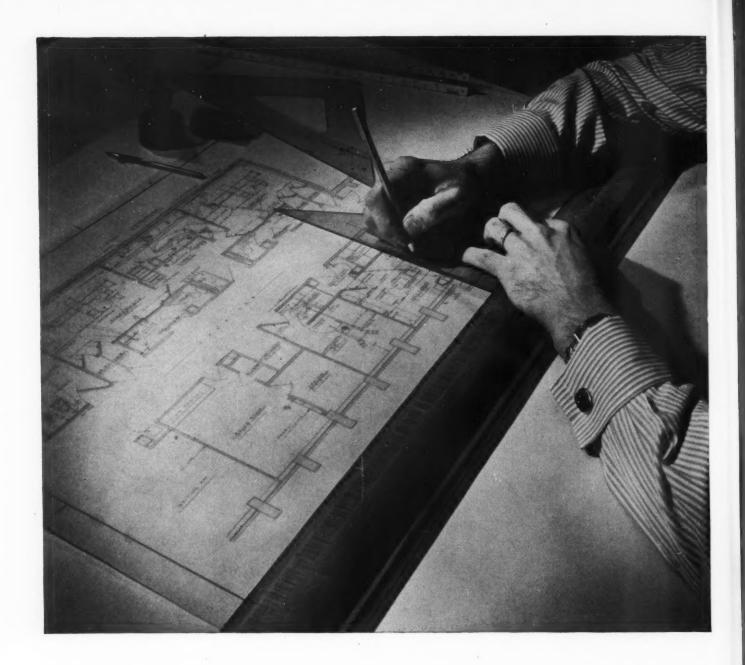
The Loewy Corporation chose Canvas Awnings to meet the Lord & Taylor standard for fashion and decor, blending them gracefully into an outstanding modern store design.



CANVAS AWNING INSTITUTE and NATIONAL COTTON COUNCIL

P. O. BOX 18

MEMPHIS, TENN.



We'll give you a hand...

Enlarging, remodeling, building? If x-ray facilities are involved, you can use these hands and the years of experience behind them. The X-Ray Department, General Electric Company maintains a large staff of full-time specialists in the design and layout of x-ray departments. They'll gladly give you a hand in planning a layout that works.

You can put your confidence in -



sratils_

NEW BEAUTY

an exciting new medium of creative design

NEW TEXTURE COLOR

SOMETHING ENTIRELY NEW AND EXCITING

HAS BEEN ADDED TO CERAMIC TILE. IT'S CEratile

Ceratile is a new line of real clay tile with unlimited decorative possibilities for interiors. It lets you express yourself as never before with standard patterns... gives you complete freedom of creative expression with custom-built patterns.



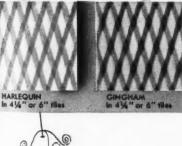


NEW











Shown here are typical designs from the standard Ceratile group of 34 patterns, fast becoming the most accepted line of decorative tile in the country. Each is a wholly new concept in tile design, texture and color combination. Each is available now. You can get frostproof Ceratile for exterior use in freezing climates. We welcome your request for full information. Just write to Dept. AR-4.

THE CAMBRIDGE TILE MFG. CO. Authorized Distributors of Ceratile, P. O. Box 71, Cincinnati 15, Ohio

- WEST COAST OFFICES The Cambridge Tile Mfg. Co., 470 Alabama Street, San Francisco 10, California
 - The Cambridge Tile Mfg. Co., 1335 South LaBrea, Los Angeles 19, California

allwood* HARDBOARD

for the men who build America

a new quality Douglas fir hardboard from the world's newest and most efficient plant. ALLWOOD hardboard...amazingly tough...amazingly versatile...challenging comparison as a new leader in quality hardboard. Produced in the mountain forests of Oregon. Distributed nationally by SIMPSON LOGGING COMPANY, Seattle, Washington.

Write for FREE booklet: The ALLWOOD Story

*Trade Mark of the Oregon Lumber Co.

OREGON LUMBER COMPANY

ALLWOOD DIVISION

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Manufacturers of Lumber and Lumber Specialties since 1889

Sound Choice!

LOCKWOOD HEAVY DUTY KEY'N KNOB LOCKS OFFER

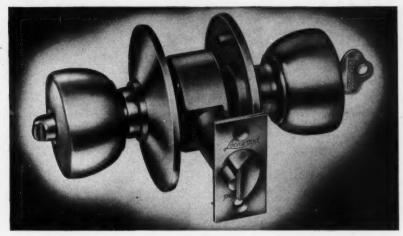
Heavy Brass Forgings for the important structural and functional parts. Brass is of course, the time proven material best suited for lock manufacture. Forging it to shape however, is a superior method of fabrication comparatively new to builders' hardware. A denser granular structure is achieved, increasing toughness and reducing wear and breakage in service.

Permanently Aliqued Assembly when installed is another bonus feature of the rugged structural members. All functional parts are rigidly held in proper relationship. Binding of parts, with resultant sluggishness or failure in action is eliminated . . . wear is further minimized.

Quick Installation... reversing of hand is a simple matter requiring only seconds... changing cylinders (on the job, to change keying) is an extremely easy matter.

Specify either HATTEN or HOLBROOKE Design for your most prideful works and you can be sure you have made a SOUND CHOICE!





Hatten Design

Contemporary lock design at its enduring best . . . its urn-shaped knobs are comfortable to grip, yet offer a pleasing diversion from the traditional eliptical profile. The 3½ inch roses give the appearance of extra ruggedness and provide extra protection for the door finish. Made in cast brass, bronze or aluminum . . . a SOUND CHOICE for the finest structure.



Holbrooke Design

Simpler perhaps than the Hatten, and with its knob and rose patterned more closely after the traditional, HOLBROOKE is designed to give the smooth, enduring performance of the Lockwood Heavy Duty Series at lower cost. It is made of wrought brass, bronze and aluminum. Where the allowance does not permit specification of Hatten . . . HOLBROOKE is a SOUND CHOICE!

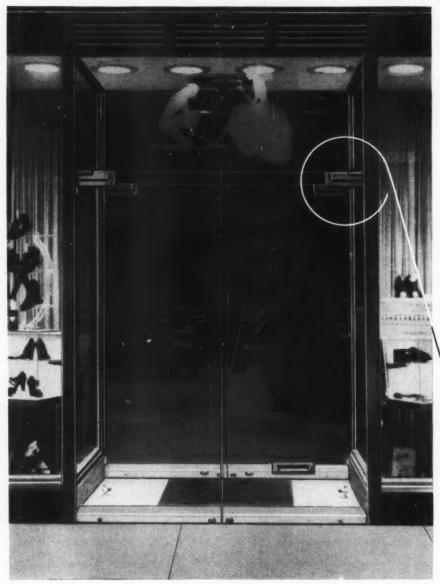
FOR USE ON SCHOOLS, HOSPITALS, HOTELS, COMMERCIAL, INSTITUTIONAL AND INDUSTRIAL BUILDINGS.



LOCKWOOD HARDWARE MANUFACTURING COMPANY

FITCHBURG, MASSACHUSETTS

To cut on-the-job costs... choose precision-built Pittsburgh Doorways



Architects: Solomon Kaplan & J. Joshua Fish, Philadelphia, Pa.

• When you specify factory-assembled, precision-manufactured Pittsburgh Doorways, you get units that cut labor costs substantially. For they eliminate time-and labor-consuming details of calculating, fitting and locating at the site. All that is involved is the unpacking of the frame, bolting it into the building opening and hanging the sturdy Herculite Doors, for whose strength the frames have been especially engineered.

Consider the high quality of Pittsburgh Doorways—their total-installed cost, not the list price—and you will find them your logical choice. We should like you to have our descriptive, fully illustrated booklet on Pittsburgh Doorways. Why not send for it now? There is no obligation. Write to Pittsburgh Plate Glass Company, 2103-2 Grant Building, Pittsburgh 19, Pa.



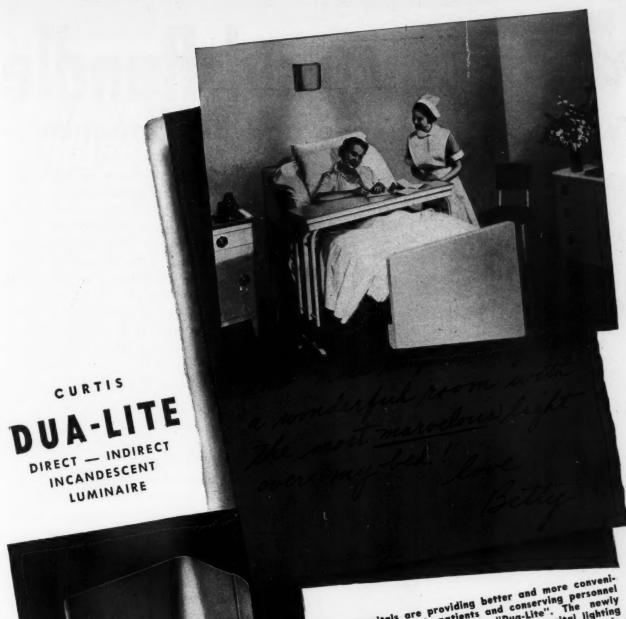
SUPPORTING the top pivot bearing, as well as the Herculite Door and Herculite transom glass, are sturdily-built transom brackets, as shown here. Eliminating the transom bar, they provide the maximum in open-vision, giving full view from floor to ceiling. Standard frames may be modified at the factory to include transom brackets instead of transom bars. For full information, see Sweet's Section 16b.

Pittsburgh DOORWAYS



PAINTS . GLASS . CHEMICALS . BRUSHES . PLASTICS

PITTSBURGH PLATE GLASS COMPANY





LIGHTING, INC.

6135 West 65th Street

Chicago 38, Illino

Many hospitals are providing better and more convenimental lighting for their patients and conserving personnel installing the Curtis "Dua-Lite". The newly installing the Curtis "Dua-Lite" is the ideal hospital lighting the patients or multi-bed wards. The "Dua-Lite" provides indirect illumination of the "Dua-Lite" provides indirect illumination illumination in the "Dua-Lite" provides well as direct illumination of the mospital room lighting as well as Fresnel lens is the patients' reading light. The patients' reading light as the patients' reading of the 75-watt lamp used for the patients. A diffusing heat-resistant cover in the direct component. A diffusing heat-resistant cover for the direct component. A diffusing heat-resistant cover indirect component. This reflect indirect component indirect component indirect component indirect component. In the component in the patient in the patient in the patient individual levoliter switch conglass, together with an efficient allowed levoliter switch control and a convenience outlet built into each "Dua-Lite" out the room. There is an individual levoliter switch control and a convenience outlet built into each "Dua-Lite" the housing is cast aluminum which is readily patient installation to blend with the room interior. Write installation to blend with the room interior. Curtis Lighting, INC.,

CURTIS LIGHTING, INC., Dept. D3-16, 6135 West 65th Street Chicago 38, Illinois

Chicago 38, Illinois	
Name	
Company	State
is Address.	
City	

Look to Universal * Rundle

for the latest in style and performance



For 51 years, Universal-Rundle has searched for and found better ways to make bathroom fixtures more beautiful, more efficient, more lasting.

Today, you can look to Universal-Rundle for the newest in smart, modern design that will sell your customers. And you can look to Universal-Rundle for long-lasting, unobtrusive performance that will build good-will for you.

To help you sell, there are full-color Universal-Rundle advertisements in leading magazines such as The Saturday Evening Post and Better Homes & Gardens. These advertisements are telling your customers about these U/R features:

Whitest white—by actual scientific tests!

Matched colors—by U/R, first maker of colored fixtures. Lovely colors, matched closer than the human eye can see!

Strongest bond between surface glaze and body gives highest resistance to chipping!

"Harder than steel" surfaces that are easy to keep clean, scratch-free, sparkling bright!

Write today for the new U/R catalog, showing the complete line of bathroom and kitchen fixtures—plus plans, drawings, specifications and helpful information. (See the U/R line in Sweet's Builders File, also.)

FAMOUS "FIRSTS" From UNIVERSAL-RUNDLE!

FIRST—with colored fixtures!

FIRST—with the one-fire Hi-fired process which gives harder-than-steel surfaces and lifetime bond between surface glaze and body!

FIRST—with the patented Rim - Jet flushing principle!

FIRST—with concealed front overflow!



Universal*Rundle

The World's Finest Bathroom Fixtures

UNIVERSAL-RUNDLE CORPORATION, DEPT. 37, NEW CASTLE, PENNSYLVANIA Plants in Camden, N. J.; Milwaukee, Wisconsin; New Castle, Pennsylvania; Redlands, California; Hondo and San Antonio, Texas



Square D Control Center will do Your job best?



O STANDARD 2 BACK-TO-BACK 3 DUST-TIGHT 4 WEATHER-PROOF

S FILTERED AIR

O Standard Square D Plug-in Control Centers in Nema I enclosures are designed for the majority of installations.

SQUARE D FOR FLEXIBILITY! Square D's plug-in units can be removed, added, or exchanged at will. Both fusible switch and circuit breaker types available. Standardized sections and units are 100% reusable after plant conversions or rearrangements.

Write for Bulletin 8938. Address Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin.



2 Space on Important Factor? Back-to-back Nema I enclosures provide maximum concentration of control in limited space.



O for Excessively Dusty Locations— felt-gasketed, dust-tight, Nema V enclosure. A "natural" for foundries, smelting and refining plants.



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air conditioning and refrigeration.

And many of the famous shops where the mills' products are sold . . . Saks Fifth Avenue, The Higbee Company, J. L. Brandeis, Lane Bryeration and unit responsibility.

Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, New Jersey.

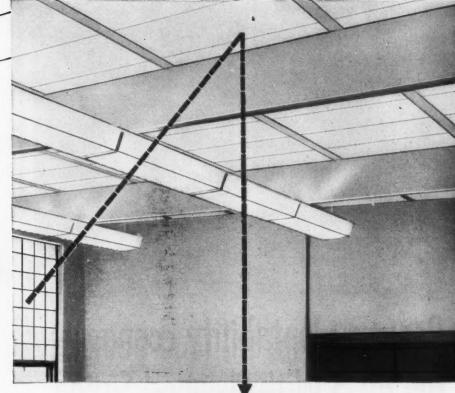
America's Leaders... in Many Businesses... Select



AIR CONDITIONING AND REFRIGERATION

The Most Complete Line... Always the Correct Recommendation





Kaylo Insulating Roof Tile | Reflects Light

... Requires No Painting or Other Treatment!

Kaylo Roof Tile provides a lightweight, insulating roof deck and at the same time forms a completed ceiling. For Kaylo Tile's smooth, near-white undersurface has a light reflection factor of approximately 80 per cent-and the tile need not be painted. Thus, a Kaylo roof deck makes it possible to save the cost of constructing a ceiling.

A Kaylo roof deck weighs only 6 pounds per square foot, yet the tile has more than sufficient strength for typical roof loads. This means that a lighter structure readily supports the lightweight Kaylo deck-and permits important savings of steel.

Kaylo Roof Tile saves on insulation costs, too. Because Kaylo Tile, a hydrous calcium silicate, has insulating value equal to one and one-half inches of standard insulation board-adequate for usual installations. Kaylo Roof Tile is incombustible; it resists water damage and is rot and vermin-proof.

The ease and speed with which Kaylo Insulating Roof Tile can be handled and placed also contribute to economical construction—forming a roof deck with advantages you will appreciate over the years.

> WRITE FOR FREE BOOK—"Kaylo Insulating Roof Tile." Address: Dept. N-213, Owens-Illinois Glass Company, Kaylo Division, Toledo 1, Ohio.



KAYLO ... first in calcium silicate

... pioneered by OWENS ILLINOIS Glass Company

MAIN OFFICE: TOLEDO 1, OHIO - KAYLO SALES OFFICES: ATLANTA . BOSTON . CHICAGO . CINCINNATI . CLEVELAND . DETROIT HOUSTON . MINNEAPOLIS . NEW YORK . OKLAHOMA CITY . PHILADELPHIA . PITTSBURGH . ST. LOUIS . WASHINGTON.



Beauty, Adaptability, Economy-Get All 3 With Plywood Siding

OF ALL SIDING MATERIALS, Exterior plywood is the most adaptable to various design treatments. It can be used to create board and batten siding . . . flush surface . . . or cut in third or half panel widths and applied as extra-wide lapped siding. It can be used in combination with other materials such as brick or masonry to achieve interesting texture contrasts.

And of all *quality* siding materials, Exterior plywood is least expensive. Least expensive in two ways: first, Exterior plywood actually costs the same or *less* per square foot than other quality materials; second, plywood's large size and easy workability speed work, cut labor and application time and costs up to *one-third!*

Exterior plywood siding is durable, too. It won't shatter, split, or puncture. And the completely waterproof adhesives used between plys are *more durable* than the wood itself!



Douglas Fir Plywood

AMERICA'S BUSIEST BUILDING MATERIAL



*PlyShield® is the siding grade of waterproof-bond Exterior-type plywood. One side is of highest appearance; for economy, limited defects are permitted in back. For use as siding, gable ends, etc. Other Exterior grades with 2 faces of highest appearance are available for single wall partitions, fences, etc.

PANEL DISCUSSION

FHA Accepts 3/8" Plywood Over Rafters 24" O. C.



On the basis of recent tests and experience data, Federal Housing Administration now accepts plywood ¾"-thick as roof decking over rafters spaced 24" on centers, according to a letter from Curt Mack, assistant commissioner of the FHA underwriting office, to Douglas Fir Plywood Association.

A revision of FHA Minimum Property Requirements is planned; meanwhile, FHA at Washington (Underwriting Office) will advise any insuring office upon inquiry that 3/8" plywood over rafters 24" on centers will be accepted. Plywood roof deck thicknesses now accepted by FHA are shown below in tabular form.

Roofing Material	Max. Rafter Spacing	Min. Plywood Thickness
Wood, Asphalt Shingles	16" 24" 24"	5/16"* 3/8"* 1/2"
Slate, Tile, Asbestos-Cement	16" 20" 24"	1/2" 1/2" 5/6"
Flat Roofs	16" 20" 24"	3/6" 1/2" 5/8"

*Under wood shingles: If plywood is less than 1/2" thick, apply 1" x 2" nailing strips.

A folder giving information regarding use and acceptance of fir plywood in homes built under FHA financing may be had free of charge from Douglas Fir Plywood Association, Tacoma 2, Wash.

Plywood Builds Band Shell



The problem was to design a symphonic band shell for the University of Virginia that would be, as nearly as possible, acoustically perfect, light and easily erected, yet amply strong and rigid. To meet these requirements, Architect Floyd E. Johnson, Charlottesville, Va., chose Exterior fir plywood framed with lumber, fir and light steel bow string trusses.

Floor of the structure is 34" Exterior plywood, supported by 2x10 joists over

large oak timbers. Wall sections are of ¼" plywood framed on all four sides by 2x4s. Roof panels are ¼" plywood secured to 2x6 framing members. Wall and ceiling panels are bolted together. Self-opening plywood blow panels, 4'x4', relieve air pressure. Acoustical qualities of the shell have been favorably commented upon by performers and audience alike.

Plywood Catalog Available



The 1952 Basic Plywood Construction Catalog, a reprint of the 20-page insert for Sweets File, Architectural, is now available free of charge to architects, engineers, builders and dealers. It contains plywood grade-use data, finishing information, suggested details and plywood construction techniques. Order from Douglas Fir Plywood Association, Tacoma 2, Washington.

Garden-Room Addition Uses Single Wall Construction



Faced with the problem of creating extra living space to accommodate the needs of his growing family, Architect Whitney R. Smith combined Douglas fir plywood, plate glass and considerable skill to add this large multi-purpose garden-living room to his Los Angeles country home.

Situated in an April-like garden planted 40 years ago, the striking plywood addition creates an intimate link between indoors and out. Physically, this is accomplished by having the floor of the room at the same level as the garden which surrounds the room on four sides. Visually, the slender supports combine with high ceiling windows to permit a smooth, unbroken flow of plywood ceiling paneling outward into the broad plywood soffits.

Architect Smith used a single thickness of ½" Exterior plywood secured to the inside of 4"x4" posts, 4' o.c. Interior ceiling paneling is ¾" Interior plywood; soffits are ¾" Exterior. Both interior and exterior walls are painted a pleasing greygreen; ceiling and soffit are light-stained.



Plywood Built-Ins Often Mean The Difference Between and and

No doubt about it, plywood built-ins have buy-appeal. Space-thrifty plywood storage wall, built-in dining bar or crisp kitchen cabinets can often mean the difference between a house that's snapped up the minute it's offered and one that's a drug on the market—an important fact to consider as selling becomes more and more competitive.

And it's so easy to add client and customer-winning distinction to your homes with plywood built-ins. For no other material is so adaptable to specific design and space requirements. With plywood, you can make the built-in fit the house—exactly. No bothersome juggling of "stock size" units. No limit to size, design, finish or color. Plywood works quickly, easily with ordinary tools. It is equally adaptable for construction of shop-fabricated units. Plywood won't split, chip or puncture. It's the logical material for every built-in.

Douglas Jir. Plywood

S. a

AMERICA'S BUSIEST BUILDING MATERIAL

Portfolio of Prize-Winning Built-Ins. Valuable collection of designs that will serve as a springboard for your own imagination. Contains over 50 designs judged best in the national "Better Living Home" architectural contest. For your free copy write Douglas Fir Plywood Association, Tacoma 2, Washington.



Art Museum

Chooses Lighting Artistry by LITECONTROL



JOB: Art Museum of New Britain Institute, Stanley Wing, New Britain, Conn ARCHITECT: Delbert K. Perry & Associate, John Perry, New Britain, Conn. ELECTRICAL CONTRACTOR: Peterson Electric Co., New Britain, Conn.

FIXTURES: 30 Special No. F74 4-lamp fixtures.
4 Special 4-lamp corner mitred fixtures.

LAMPS: Standard warm white fluorescent.

AREA: 32' x 60' x 12' ceiling height - 1,920 square feet.

WATTS: 6.500.

WATTS PER SQUARE FOOT: 3.3.

AVERAGE INTENSITY ON PAINTINGS, vertical plane (outside row of lamps only) 20 footcandles in service. (With all lamps on) 32 footcandles

Here paints the magic brush of light ... custom-tailored by LITECONTROL ... by the ingenious modification of standard Litecontrol fixtures.

But because they are crafted by lighting artisans...and made in many styles and designs . . . LITECONTROL fixtures provide installations which are "standard" in price only, definitely custom in appearance and performance.

Problem here was to enable paintings on wall to be featured or, when desired, to permit featuring of floor displays (see small photo). Planned Lighting by Litecontrol provided fixtures with outside lamps operating independently of inside lamps, with light shielded by a vertical baffle. Thus, the outside row alone evenly illuminates the paintings around the

walls, or the inside row alone can be used to highlight center displays. Note how the fixture row follows the room contour, even at the mitred walls, for evenness of illumination.

On your next lighting problem, call in LITECONTROL - and save.

See You at Booth 102, Lighting Exposition

LITECONTROL CORPORATION, 36 Pleasant Street, Watertown 72, Massachusetts DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS



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There are ways to stretch out your supply of stainless.

For example, you may be using a grade or finish of stainless that is in extreme demand when another similar one, not as tight, could do the job adequately.

Our metallurgical staff and stainless fabricating specialists are ready to help you look into this matter and to advise you on more readily-available types of stainless that will do a satisfactory job. Feel free to call on us for this specialized help.

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52 years of Fine steelmaking

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Roddiscraft Solid Core Flush Veneered Doors

An Institution with Institutions

For nearly two generations Roddiscraft Doors have been standard equipment in hospitals, schools, hotels, churches and other institutions. Roddiscraft standard construction incorporates all the features demanded by institutional installations — fire protection, sound resistance, ability to take rough treatment. Roddiscraft standard 5-ply construction — core, crossbandings and faces welded into a single unit — builds in all the strength and stability of plywood construction.



SAFE — Standard 1-3/4" construction withstands independently conducted fire tests in excess of 40 minutes.



SILENT—Standard 1-3/4" construction develops a sound transmission loss of 30.9 decibels.



STURDY — Solid core and strong 1/10" crossbandings give complete support to the faces — absorb shock.



WATERPROOF—Two complete waterproof glue lines deny entrance to moisture.

Standard Thickness Face Veneers* Out-Look and Out-Last Thick Veneers

The thinner the face veneer, the less wood exposed outside the waterproof glue line. That's a self-evident fact — and that's why Roddiscraft Standard Thickness Face Veneers — *1/28" for most woods — are best. Exposure tests show checking patterns become coarser and more conspicuous as the face thickness increases. Thin veneers also

permit better matching, are more resistant to abuse because of the tough hardwood crossbandings to which they are inseparably bonded.

Roddiscraft construction utilizes 1/10" thick hardwood crossbandings . . . sure protection against core pattern showing through face veneers after finishing.

FOR SPECIAL INSTALLATIONS

FLUSH VENEERED FIRE DOORS FOR INTERIOR USE...

Advanced safety features that guard life and property are built into Roddiscraft Protex Doors. That's why these doors are so often specified in plans for hospitals, hotels, schools and apartment buildings. They are built to withstand the 60-minute fire test, including the hose stream test. Independent laboratories show they have a safety margin well above the prescribed minimum. Identical in appearance to other Roddiscraft Flush Doors.

FLUSH VENEERED DOORS FOR X-RAY PROTECTION...

The Roddiscraft X-Ray Door matches regular Roddiscraft Flush Doors in appearance. It is equipped with a continuous sheet of lead set midway between a divided wood core. Otherwise, it is identical in all respects to the Roddiscraft Solid Core Door. Roddiscraft X-Ray Doors are manufactured only on special order. Any thickness of lead may be specified, according to the amount of protection required.

Roddiscraft

RODDIS PLYWOOD CORPORATION

MARSHFIELD, WISCONSIN

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Now..."individually engineered" panelboards...in minutes!

BullDog's new principle of standardized units gives architects new flexibility in planning, simplifies specification of panelboards up to 42 circuits

Here's news that architects will welcome. By standardizing on component parts, BullDog has engineered 5 basic panel devices that can handle any requirement up to 42 circuits.

These basic units can meet your circuit and rating specifications *exactly*, and, in effect, be "individually engineered" to your plans . . . yet your contractor or client can get them *immediately* from local BullDog Distributor stocks.

BullDog panelboards are highly flexible, too. Individual Pushmatic circuit breakers are interchangeable, and available in a wide range of ratings to meet present and future circuit requirements. Where circuit spaces aren't utilized immediately, filler plates may be used; and your client can add as many as 36 extra circuits later, as needed.

Forget about costly, custom-built panels that often cause construction delays, that won't adapt to changing electrical needs. Specify BullDog Pushmatic Electri-Center Panelboards. They're mass produced and cost your customers less at no sacrifice in quality . . . but at a definite gain in flexibility, speedy procurement and convenience.



BullDog Pushmatic Electri-Center Panelboards. For complete details, send for free Bulletin 513.

BULLDOG Pushmatic Electri-Center Panelboards

- For plants, commercial buildings, institutions.
- Underwriters'-listed up to 42 circuits.
- Individual Pushmatic units (Thermal Magnetic) rated 15, 20, 30, 40 and 50 Amps.; quickmounting, fully interchangeable
- Meet Federal Specifications WP 131a Class A
- Push-button switching and automatic circuit protection. No reset position.
- Code Gauge steel fronts, flush or surface type.
- Code Gauge steel boxes with ample knockouts in removable ends.
- •4"-wide gutters for easy wiring.
- Provision for Main Lugs at top or bottom.
- •Flexible from every standpoint.



BULLDOG ELECTRIC PRODUCTS COMPANY

DETROIT 32, MICHIGAN • FIELD OFFICES IN ALL PRINCIPAL CITIES IN CANADA: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO

PIONEERS IN FLEXIBLE ELECTRICAL DISTRIBUTION SYSTEMS

1902-1952 . . . SERVING INDUSTRY FOR 50 YEARS WITH FINER ELECTRICAL PRODUCTS

One of a series of papers prepared by leading authorities on air conditioning. The opinions and methods presented are those of the author and are not necessarily endorsed by the Du Pont Company. Reprints of this and other articles in the series may be had free upon request.

AIR CONDITIONING THE MODERN HOTEL

By Guy B. Panero—Consulting Engineer



GUY B. PANERO, whose firm has offices in New York and Washington, has practiced as a professional engineer both in this country and abroad over a 25-year period. His organization has specialized in the design of air conditioning systems for commercial, institutional

and industrial buildings, and has been responsible for mechanical engineering on numerous large hotels—among them the Waldorf-Astoria and the new Hotel El Panama. His firm is presently serving as consultants for a new hotel in Italy and has recently completed work on a luxury residential hotel in Bogota, Colombia.

Today's hotel structure is essentially a group of special occupancies housed under one roof. In a modern hotel of medium size, for example, there will be guest rooms, a cocktail lounge and bar, dining rooms, coffee shop, ballroom, various private dining rooms, stores and offices. For both business and competitive reasons, all these spaces should be air conditioned.

Each area, however, presents a special problem. To illustrate, air conditioning for the dining room, cocktail lounge and bar will differ little from that of restaurants and bars of the luxury type discussed previously in this series.

In the hotel, however, judgment is required in grouping similar types of occupancies and load demands to obtain highest efficiency from the installed system.

GUEST ROOMS

The largest part of the load demand in any hotel, of course, is that supplied by the guest rooms. These rooms can be served by a central system or one based on the unit-system plan. Let us first consider the central-station system. This can be one of two designs, although, basically, both use a central air conditioner with a supply fan or blower to deliver conditioned air through the air-distribution system or ducts.

The central-system design, using zones, will have areas of similar load conditions grouped together; each with its own air distribution and its own fan or blower. Volume control has been used but is not the writer's recommendation. Control by temperature is preferred.

A central-station system can also be part of a design that uses two separate ducts to convey air to the rooms. One duct transports cool and dehumidified air when cooling is required; when heating is necessary, it has air from the return system. The other line carries heated and humidified air when it is necessary to supply heat, or by-passed air for cooling. In this way, the two lines can be used summer and winter for supplying air at different temperatures. Automatic dampers take care of the air mixing problem to provide the proper room conditions, although the total air volume delivered is fixed.

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Air from these two systems can be supplied to the rooms through cabinet units placed at windows, or, where a less conspicuous location is desired, ceiling outlets may be used.

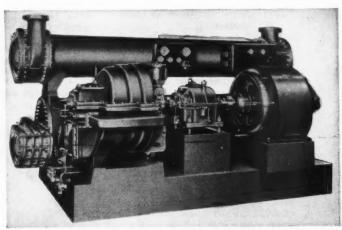
Air conditioning through the unit system can be by:

- 1. Self-contained units.
- 2. Fan units.
- 3. High-pressure induction units.

Although there are many trade names for unit systems now available, they can be grouped into three classifications:

Self-contained units are boxes installed outside windows and connected to the nearest appropriate inside electrical outlet. They contain a compressor or air conditioning unit, cooling coil, filter, fan, motor and the necessary controls.

Fan units can be set in a cabinet placed at a window, or



Carrier Compressor of type similar to that installed in Waldorf-Astoria.

ceiling-mounted and installed over a door or in a closet. The cabinet contains a fan and motor, cooling or heating coil, condensate pan, filters and controls. Such units are commonly served from a central system supplying chilled water or refrigerant. With a central system, the fan only handles recirculated air, although some outside

air can be brought in. When heating is required, hot water is circulated through the cabinet coil.

High-pressure induction units consist of a cabinet that contains a coil used for cooling or for heating, a condensate pan and controls. Conditioned outside air is delivered from a central station at high velocity. As the air emerges from the cabinet, it causes a secondary flow of room air over the coil. From 75% to 80% of the room air is recirculated.



The Waldorf-Astoria in New York ... famed for comfort and hospitality... makes extensive use of modern air conditioning.

NOISE IN ROOMS

Guests demand an air conditioning system that is quiet in operation. Whether self-contained units, fan units, induction units or a central-station system is selected, precaution must be taken to keep the noise level at a minimum in the guest rooms or conditioned spaces.

VENTILATION

In addition to conditioned air normally supplied, a large amount of outdoor air may be necessary to dilute smoking and other odors. In between cooling and heating seasons, there may be a period when it is desirable to deliver 100% outside air.

The central-station systems described can supply $100\,\%$ outside air when necessary. However, the self-contained units and the induction units are limited to the delivery of about $25\,\%$ outside air. Although fan units can deliver an amount larger than this, they cannot approach the quantity of outside air that can be supplied by a central system.

The three unit systems continuously recirculate the same room air. Central-station systems mix return air from all rooms and in that way dissipate smoking and other odors.

AIR SUPPLY AND DISTRIBUTION

The successful system must properly condition air supplied. The air must be delivered evenly over the entire conditioned area so that there is an absence of drafts, and air quantity will remain constant with varying loads. How the air should be distributed calls for good engineering.

GROUPING OF LOADS

Systems serving the hotel lobby and guest rooms are

designed to function 24 hours a day. Public dining rooms, cocktail lounge, barber and beauty shops, stores and offices, however, are in use only part of the day. Since barber and beauty shops and stores have the same operating characteristics, they may be grouped and served by one system. A ballroom has a high heat load but is only used occasionally. Considerable attention must be given the occupancy and use factors before determining the grouping of areas to be served by one system to cut down operating costs.

MAINTENANCE

Central-station systems can be serviced easily because the equipment is installed in a few locations. Such equipment is more conveniently attended, and better maintenance becomes possible at lower cost. Although central systems may be costlier, savings in operation generally help offset initial expense.

Equipment located in guest rooms may frequently be difficult to service because of room occupancy. Self-contained and fan units have filters that must be changed periodically, and both fan and induction-type units have pans that may become clogged. For best results at all times, the hotel should have an effective maintenance schedule for servicing all units of the systems.

In the foregoing paper, Mr. Panero has presented a working approach to the complicated problem of air conditioning today's hotel structure. There are, of course, many details which could not possibly be covered in so brief a report. However, it is believed that this outline of the various types of air conditioning systems available will prove helpful in determining how best to meet specific requirements.

Each of the systems mentioned above is of a type operated with "Freon" refrigerants. Obviously, the factor of safety is a prime requisite in any hotel air conditioning installation. Because "Freon" refrigerants are safe . . . noncombustible, nonexplosive, virtually nontoxic, harmless to fabrics and finishes . . . they are ideal for hotel systems which serve the public. In addition, the chemical purity of "Freon" refrigerants—rigidly maintained by laboratory-controlled methods of manufacture—contributes to the dependable, economical operation of the equipment over long periods. "Freon" refrigerants help protect the owner's original investment—an excellent reason for your recommendation of systems using them. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Del.



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The exterior beauty of an Atlas Flush Door rests not alone on the simplicity of its lines and the superior quality of its surface panels... Its engineered, internal construction is a major factor that assures permanently fine appearance.

Whatever you choose for surface panels

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like—the principles of construction remain
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There is an Atlas Flush Door to fit every architectural scheme and every budget. If the door is to be painted, less expensive paint grade veneers are available. Similarly, stains on gum offer a choice of Mahogany, Walnut and other "furniture" finishes—with economy.

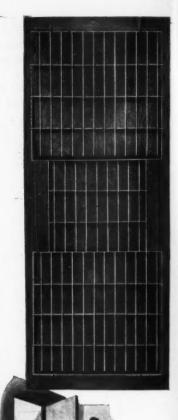
Every Atlas Flush Door is the product of a single, wholly integrated organization. From standing tree to completed door, there is one standard of control and inspection — one responsibility. We'd like you to know more about Atlas Hollow Core and Solid Core Flush Doors. For illustrated literature, kindly address your request to Department 64.





SOLID

The core material of the Atlas Solid Core Flush Door is Balsa Wood — inert, proof against stress and warpage. With the same K factor as cork, Balsa has important sound-deadening qualities. Its low thermal conductivity means efficient insulation. Its light weight means light weight for the finished door. The core blocks are positioned within a kiln-dried frame. Lock blocks on both sides permit the door to be hung from either right or left.





In the Atlas Hollow Core Flush Door, kiln-dried soft wood struts —running both laterally and perpendicularly—interlock to form a grid. Wherever two struts interlock, the outer corners are beveled to permit free air circulation. The carefully machined frames are of kiln-dried White Fir or Ponderosa Pine, Lock blocks on each side permit hanging from either right or left, Before the surface panels are bonded to core and frame, the interior surfaces have been completely sized, to

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sills, stools, and trim of ALBERENE stone are

DURABLE and ECONOMICAL

Detail showing $1\frac{1}{2}$ " thick slip sill with $1\frac{1}{4}$ " stool and $2\frac{1}{4}$ " belt course.

Regular Grade Alberene Stone is an ideal material for exterior trim because it can be cut into thin sections, permitting substantial economies. It offers freedom to the designer—by making possible greater reveal, to give just one example.

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Alberene Serpentine. It is a darker gray in rubbed finish, blue-black when honed, and blue-black or black when polished.

The high chemical resistance of both stones, which has made them favorites for use in laboratory equipment, also makes them ideal for window stools in laboratory buildings.

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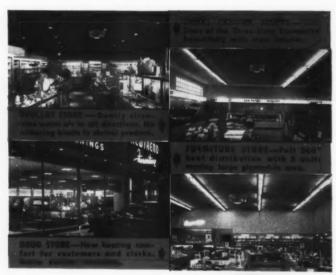
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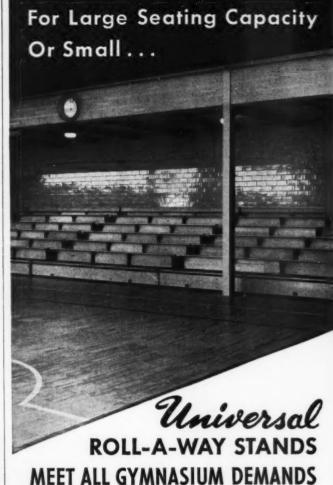
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Door rolls smoothly, quietly on not two . . . not four . . . but on EIGHT Nylon wheels, Ball bearing axles.

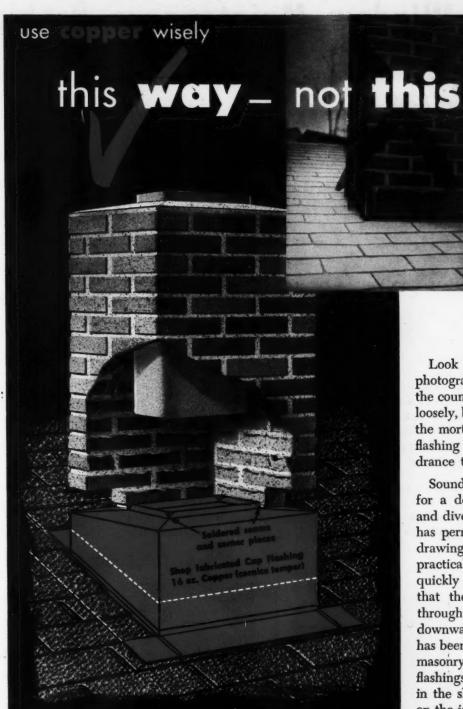


Left: Header adjustable two ways: (1) Pocket end allows 3/4" horizontal adjustment to fit rough opening; (2) Jamb end permits 3/4" vertical adjustment,



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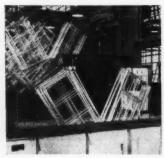
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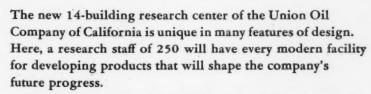
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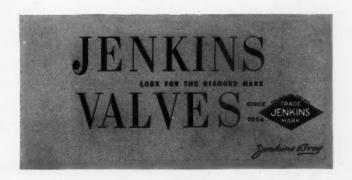
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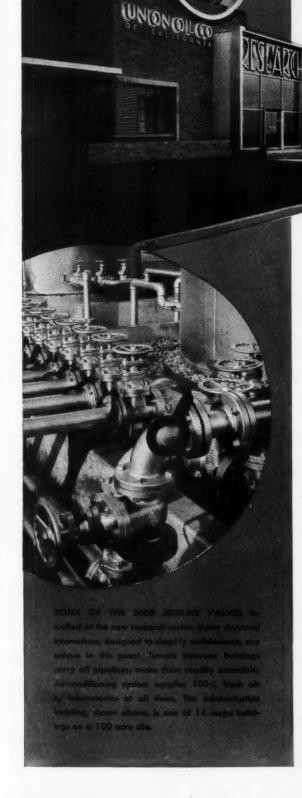


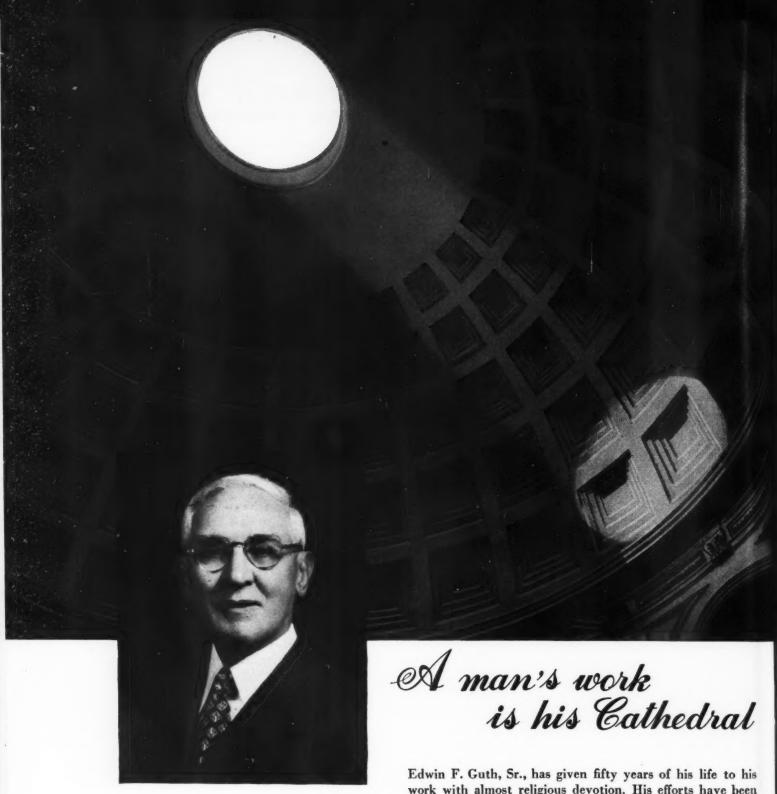
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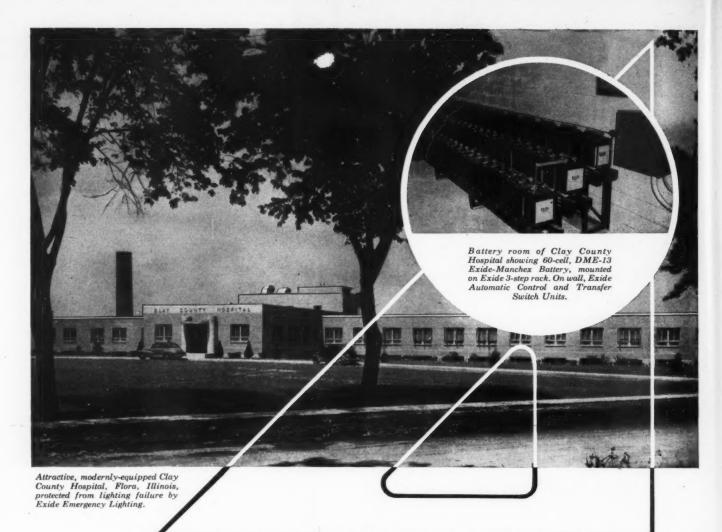
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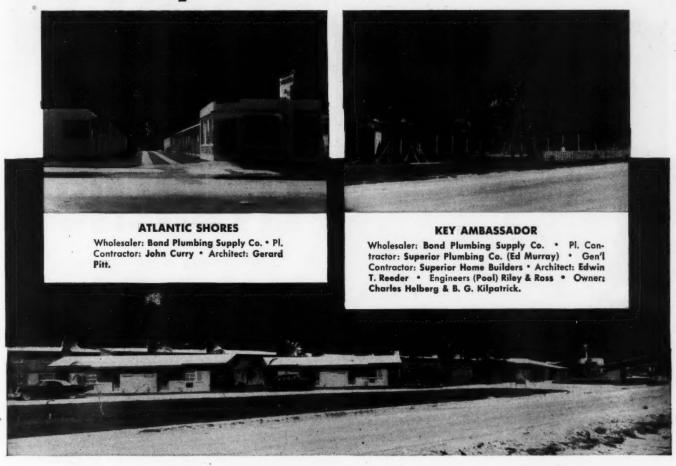
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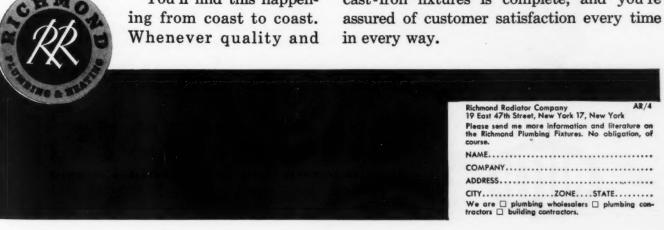
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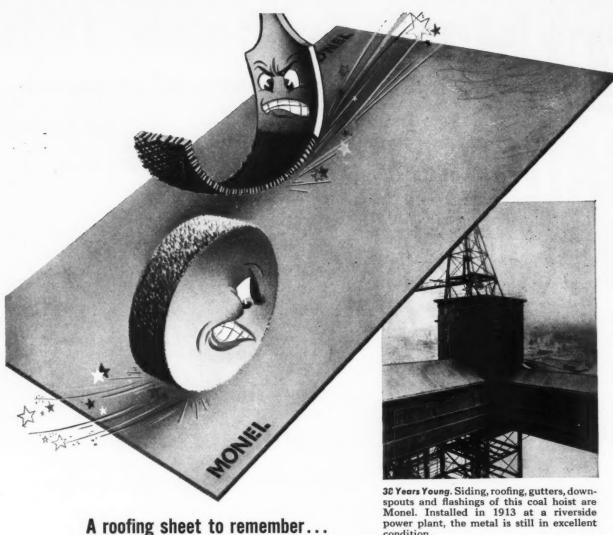
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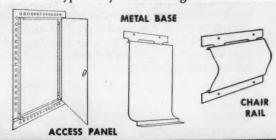
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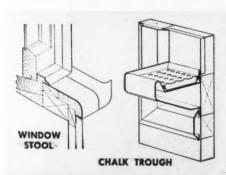
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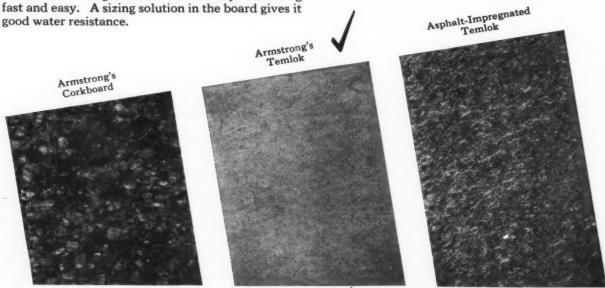
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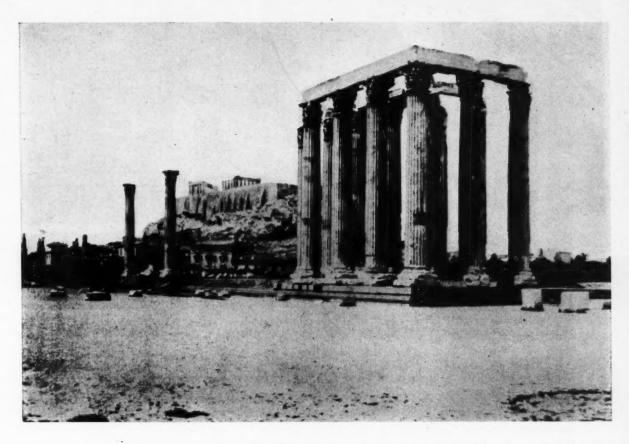
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"Monumentality is only for the gods. The Acropolis was never a gathering place." Temple of Zeus Olympios, Athens

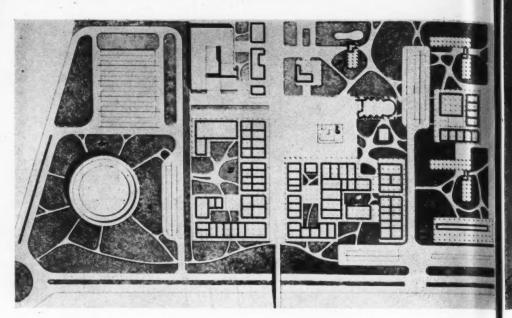
THE HUMANIZATION OF URBAN LIFE

By S. Giedion

If we examine, from a human point of view, the road that architecture has been obliged to follow during this century in order to come to terms with its own period, we shall find this divided into two distinct stages.

The development started as a fight against an "infected atmosphere and as a moral revolt against the falsification of forms" (Henry van de Velde). It began far back in the nineteenth century with William Morris's purification of the immediate human environment by giving dignity of form to objects of daily use. From here it passed on to architecture, nowhere more markedly than in the single-family houses built around 1900 by Frank Lloyd Wright and others in the suburbs of Chicago. The American spark reached Europe. The work of the Stijl Group in Holland, Mies van der Rohe's projects for a country house, Le Corbusier's first Paris house in reinforced concrete, were all produced early in the century and all were single-family houses. A study of the single-family house—





A gathering place for an American city, Sunset Community Center for San Francisco. Wurster, Bernardi & Emmons, coordinating and master plan architects

A gathering place for a South American city, Civic and Commercial Center for Chimbote, Peru, featuring an open square surrounded by church and commercial buildings, by Paul Lester Wiener and José Luis Sert

plac

man's most intimate environment—enables one to understand better than anything else whether a man really knows how to build. The climax of this development came later in California. (I was able to develop this observation when editing a volume of the works of CIAM architects from 22 countries—"A Decade of Contemporary Architecture," Zurich 1952.)

The family cell was still the motif of the different forms of multi-storied dwellings that were developed parallel in time, including three-story row houses and skyscrapers. The so-called "tower" houses that have been particularly developed in Sweden are a compromise between high and low forms of housing and, for several reasons, they may be discarded sooner than expected.

The beginning of a link between social and esthetic aspects of the housing movement was marked by J. J. P. Oud's Rotterdam worker settlement (Tusschendyken 1919/20). Today it has reached an experimental climax in Le Corbusier's *Unité d' Habitation* at Marseilles which, by reason of its esthetic importance as well as its internal organization, is as much a contribution to urban design as it is an agglomeration of family dwellings.

This has been the first part of the route. The second stage of contemporary architecture is more concerned with the humanization of urban life. The relation of the parts to the whole, the contact between the individual and the community, has to be restored.

A glance at the big cities, whose functioning has become paralyzed by the impact of mechanization, gives rise to scepticism. Where in a "megalopolis" does one

find any trace of community life, or of enjoyment based upon spontaneity and social intercourse, other than in passive observance of a movie or a football match?

Absolutely true. Yet the suppressed demand for social contact, which has lived on imperishably in the human soul ever since men first met in caves during the ice ages and left their ritual symbols on the walls, breaks out spontaneously when man is shaken by some great event. I remember the gathering that collected at the tiny Rockefeller Center at the end of the second World War, when the voice of Lily Pons suddenly arose and gave expression to the emotion that moved the masses.

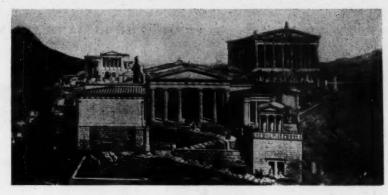
It is one of the curious features of present day civilization that the contemporary creative focus can no longer be traced to a single center. Today creative impulses within the same movement arise all over the earth.

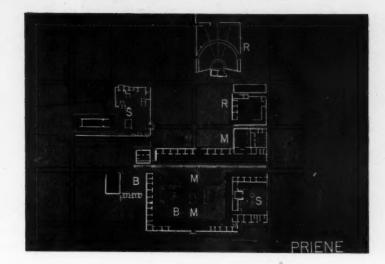
The Heart of the City

The endeavor to re-establish an equipoise between the individual and the collective sphere is proceeding today throughout the world. This may have been the underlying reason for the selection of the Core of the City as the theme for the 8th congress of CIAM (Hoddesdon, England, July, 1951). The term "core" which was introduced by the MARS group of London in the place of "civic center" (whose meaning has become too closely restricted to administrative buildings) may soon come into general use.* Since 1300, according to the Oxford

^{*} The whole problem will be developed in "THE HEART OF THE CITY" edited by E. Rogers, J. L. Sert, J. Tyrwhitt (Lund Humphries, London, 1952).







Agora of Athens was an exception in that it had a temple — "the Acropolis was never a gathering place." Right: the agora of Priene, an example of the final status of the agora of old Greek cities

English Dictionary, the word core has meant "the central innermost part, the heart of anything" and it was defined by the MARS group as "the element which makes a community a community and not merely an aggregate of individuals."

Contemporary interest in the core is part of a general humanizing process; of a return to the human scale and the assertion of the rights of the individual over the tyranny of mechanical tools. It seems possible that this demand for the re-establishment of community life is likely to be satisfied sooner in the new town cores that are now coming into being in Peru, Colombia and India than in the highly mechanized cities of the USA.

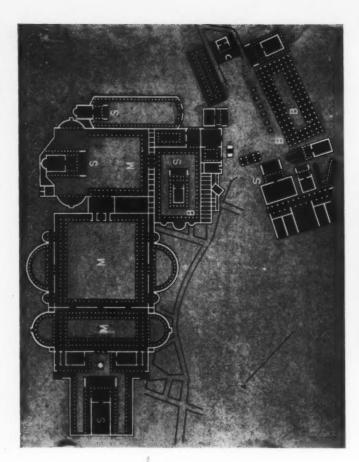
Is it possible, in our western civilization, to build functioning city cores in the absence of a well-defined structure of society? In contemporary art — poetry, music, painting, architecture — we can see that during the last forty years a new language has been evolved out of our own period by artists who themselves seldom adhere to a formal religious creed or well-defined political convictions.

This development is not without an inner significance. It seems that a new stage of civilization is in formation in which the human being as such — the bare and naked man — will find a direct means of expression. We do not know consciously, for instance, why certain forms or symbols which have no direct significance appear again and again in the works of the most diverse painters. All of these forms are somehow bare and naked as yet. They are, at any rate for the present, symbols

without immediate significance. As Sartre once wrote, "we need today signs and symbols which spring directly to the senses without explanation." He then strengthened this statement by reference to experiments that have been carried out by certain psychologists.

The problem of the core is a human problem. The extent to which it will be fired with life will depend on the people themselves. Architects and planners know that they cannot solve this problem alone and that they need the cooperation of sociologists, doctors, historians. For example, no one at the CIAM 8th congress was listened to with greater attention than Dr. G. Scott Williamson, founder of the Peckham Health Center in London, which was indeed a "core" based on the spontaneous activities of people of all ages. Then the historian was asked to present the historical background of the core, because our period has lost so many of the formerly accepted norms of human behavior and human relations that a special interest has arisen in the continuity of human experience. We are vitally concerned to know how those who came before us handled certain like problems. For instance, how did they develop social intercourse and community life? There is, of course, no suggestion that we should imitate our forebears, but I believe (and here I come back to the symbol of the bare and naked man) that there are certain continuous features running through human history — certain experiences which appear and are lost and then come up again.

To take only a very simple example: the right of the pedestrian in the center of community life — in the core.





The Roman Forum and the Imperial Fora differed from the Greek agora; the "Forum Romanum was a completely disordered place," intermingling business, religion, justice and public life, impossible to the Greeks

This was carefully respected, and indeed self-evident, in all former civilizations. Today this right of the pedestrian — this human right — has been over-ridden by the petrol engine, and so the gathering places of the people — the places where people can meet together without hindrance — have been destroyed. Today one of our hardest tasks is the reestablishment of this human right, which is not merely imperiled but has been destroyed altogether.

So, when we look back into history we wish to pose very human questions such as, "What is still the same and what is quite different between us and you?" Or, in this particular case, "Is there still today a need for the core?"

Does this question really need an answer? There are many architects and planners who are at this moment engaged in the actual work of construction and reconstruction of city centers; who are in the midst of the practical problems of realization of their plans for the core. Besides this there are also other anonymous signs of interest in this question, which are, from the point of view of the historian, just as important. These are direct impulses that are arising from the general public.

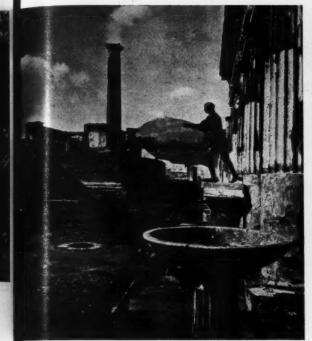
Spontaneity

The man in the street — and that means each of us — has undoubtedly an urgent desire to get away from his purely passive position as an onlooker at a football match. Today he wants — and this is different from the nineteenth century — to act his own part in social life.

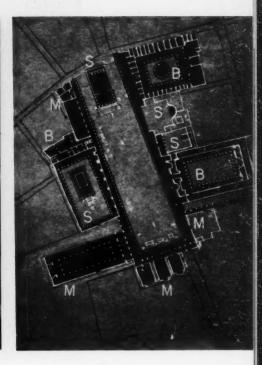
In June, 1951, we had a festival in Zurich to celebrate the 600th anniversary of the entrance of Zurich into the Swiss Confederation. The streets of the medieval city center were closed for two days to all traffic, and benches were spread over the tracks of the tramways. It poured with rain, and yet one couldn't chase the people away from the streets. Everywhere there was music and throughout the whole night people danced in the streets under umbrellas, and medieval nooks and squares were used as open air theaters. The festival was a reunion of people from the whole canton of Zurich. Those who came from the different parts of the canton gathered spontaneously together and performed their own plays. We had been very much afraid that the medieval core of Zurich had been altogether destroyed. Suddenly we discovered that something still remains and that — given the opportunity - people will dance and play theater in these open spaces.

Everybody was astonished at the spontaneity of the public. To be actor and spectator in one person, that's what is wanted! It is clear that the public is ready. The question is whether we are! Let us not wait for a structurally well-defined society to arise. Let us just ask what is alive in the bare and naked man and needs to be given form and expression. Let us just ask what there is that lives in the bare and naked man, who is not just a symbol but is us, ourselves.

I had another experience recently in Amsterdam. I saw a number of childrens' playgrounds that have been created under the guidance of van Eesteren and designed







Pompeii with its temples (and with stepping stones at openings) barred wheeled traffic from the public square

by a young Dutch architect Aldo van Eyck. These have been made from very simple elements — a circular sand pit, some upright steel hoops, a parallel pair of tree trunks lying horizontally. But these simple elements are grouped so subtly — with a background of the Stijl movement and modern art which injects some kind of vitamin into the whole performance — that they act as fantastic starting points for the child's imagination. These playgrounds also, simultaneously, fulfill another function. The careful design of their layout has transformed useless pieces of waste ground into active urban elements. One needs only to provide the opportunity and we, the public, who are also maybe children of a kind, will know how to make use of it.

The Core in Greece and Rome

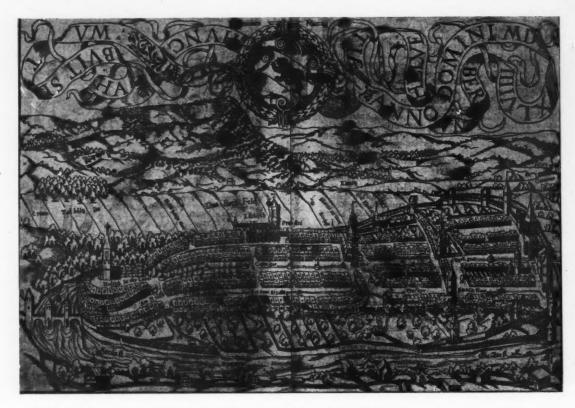
Like plants, human settlements require certain conditions for growth, though human community life depends upon far more intricate conditions than the plant. What is common to both however is that there are certain periods which favor growth and other periods which hinder it. There are periods in which many new cities are founded, and hundreds of years during which no new cities are started at all.

A city is the expression of a diversity of social relationships which have become fused into a single organism. The conditions which influence its growth can be of a widely dissimilar nature. New cities have arisen in periods of dictatorship, when the despot has had power to compel everyone to build in conformity with a single design. They have also arisen in periods of purposeful communal energy. The despot has the advantage of his capacity for rapid and ruthless action; but, as his sovereign will is bound to ignore the imponderable laws which stimulate human cooperation, a city built under a dictatorship can never acquire that essential quality of organic diversity. In cities that have been developed by the united efforts of their citizens, everything — even to the last detail — is permeated by a marvelous strength.

Never since the Fifth Century B.C., when the democratic way first found expression, has so much loving care been lavished upon the gathering places of the people, or space been so amply provided for them. Nor has the place where the decisions of the people have been enunciated ever dominated the physical and moral structure of the town so effectively as the agora of these Greek cities.

When I was in the United States I felt very conscious of the absence of places where one could stand about — to rest, to stop, to speak, just to move about in. To make the future generation of architects consciously aware of this absence, I conducted a seminar on "civic centers and social life first at Yale in 1942, then in both Zurich and M.I.T., where some of the illustrations to this article were made by the students. These illustrations follow the normal methods of CIAM in that each city is represented in the same manner and upon the same scale.

A sociological question came up immediately: "What was the relation between the plan of the city and its



The City of Berne, an example of one of the planned towns of the 12th century

social life?" and we were plunged at once into this curious experiment of Greece—the most exciting that mankind has ever experienced—this sudden awakening of the individual mind with, behind it, the enormous background of Oriental and Egyptian tradition.

The gridiron system is an oriental invention. This is clear, not only from recent discoveries in the Valley of the Indus, but — above all — in the work of the only Egyptian revolutionary, the Pharoah Akten-Aton, who in the 14th century B.C. built, within twenty-five years, a city on the Nile (on the site of the present village of Tel-el Amarna), which is an absolutely clearcut gridiron. But the Greek gridiron of Hippodamus is something quite different from the gridiron of Akten-Aton (and also completely different from the gridiron of Manhattan). In both Egypt and the culture of the Near East the gridiron had within its center either the palace of the king or the temple. In Greece it was completely different. Here the core of the gridiron was the agora — the gathering place of the people.

What is the agora? It is now established that in the beginning the agora was above all the gathering place of the people and not just a market. It was only with increasing trade and wealth in the fifth century B.C. that the agora became more intermingled with commerce. The agora in principle is an open space — a square — surrounded loosely by simple buildings intended for public use. In the Hellenistic period the agora came to be bounded by standardized elements, still very simple in form — columns, porticos and an entablature — that

formed the stoa, a covered way protected against rain and sunshine which served above all as a meeting place for the formation of public opinion. Sociologically it is especially interesting that no buildings faced directly upon the agora itself. The stoa was supreme. The public buildings — Prytaneum*, Buleuterion**, etc., were in close contact with the agora, but stood behind the stoa. The agora itself was for the community: not for the council, not for anyone else, but only for the people, and exclusively for the people. On the inner wall of the stoa and in the square itself objects were placed in memory of those who had worked well for the community.

Priene is one of the best examples for study because of the excellence of its excavation, and it is interesting to notice here the lack of direct relation between effect and cause. Here, as in so many other cities, the final status of the agora only appeared after the Greeks had in fact lost their liberty. Agoras in their final form were made at the time of Alexander or later, very few before. But the idea of the agora is inherent in the democratic conception of Greek life.

One thing more. In the Greek cities there is a clear classification of functions. Monumentality is only for the gods. The Acropolis was never a gathering place. First it was the quarters of the king, then, when he was eliminated, it became the quarters of the gods, the consecrated area with the temples. Recent American excavations have shown that there was a temple on the

^{*} Public building enclosing the eternal hearth, mystical court and the assembly of the elders.
** Council Hall.



The main square of Siena, all lines as well as the formation of the square, pointing to the town hall

agora at Athens, but this agora, which was gradually built throughout centuries, was an exception. The agora is a community place, well defined and very nicely arranged, but very simple. Finally there is the private life. By the law of Athens any citizen who had too large a private house was chased out from the city. Private life was very humble. These three degrees — first the gods, then community life, then private life — were never again distinguished so clearly. Even in medieval cities — the only period in which we can see a continuation of antiquity — different functions were intermingled.

Now the Romans. What is the difference between the Forum Romanum and the agora? It is very clear and very great. The Forum Romanum was a completely disordered place. It would have been impossible in Greece to place the prison, the carcer, next to the rostrum, the people's platform. Carcer, rostrum, temples, treasure houses and comitium (the patrician's stronghold): this was the nucleus of the Roman Forum Romanum. The Romans from the beginning intermingled business, religion, justice and public life. But this does not mean that the Romans did not understand how to build cities. It is true that Rome itself never had a plan. All failed who made the attempt - Julius Caesar, Nero, the Antonins. The city of Rome was so much a disorder that traffic had to be forbidden in the streets during the day by law. The rich lived in the best places on the hills and the poor in squalor in buildings of five to eight stories.

But there are small Roman cities such as Ostia or

Pompeii where the urban development becomes more evident. In both of these — in contrast to the Greek practice — there is a temple dominating the forum.

But besides differences between Greece and Rome, which reveal divergent conceptions of community life, common features prevail. The right of the pedestrian is regarded as sancrosanct in both the agora and the forum. For instance, the surface of the main forum of Pompeii was depressed: "stepping stones" and columns made it impossible for wheeled traffic to enter.

One word about the Imperial Fora of Rome, which were built over a relatively short period — 50 B.C. to 115 A.D. — from Julius Caesar to Trajan. The Imperial Fora in their sterile pomp are, for me, the beginning of academic architecture. They somehow foreshadowed the nineteenth century.

The Core in the Gothic Period

What happened through the medieval period? Decay, decay, decay, through centuries. The standard of life sank rapidly. Existing cities became depopulated and hung heavily, like an over-large garment, upon the shoulders of their shrunken inhabitants. Then came a sudden awakening. In the eleventh and twelfth centuries new cities were founded all over Europe. I may have a certain prejudice, but I find the most interesting are those in South Germany and Switzerland. The normal view of the romantic medieval city is here entirely debunked. These new towns were not in any way haphazard foundations. As a consequence of the low stand-





Michelangelo's Capitol in Rome, 'a comprehensive development in depth'

ards of living that had prevailed through centuries, these new medieval cities, in contrast to the cities of Greece and Rome, show an intermingling of public and private life. The market place, whether bordered or not by arcades, is surrounded by the private houses of the citizens. Also, in contrast for instance to Pompeii with its stepping stones, no care is taken to see that traffic is kept out of the public square. On the other hand, the street — the shopping street — acquired a new and much more intense significance.

The city of Berne may be taken as an example of one of the planned towns of the 13th century (and also to destroy the romantic conception of the medieval cowpath city). Berne was laid out in regular and equal ground plots, 100 x 60 feet, along three parallel streets. These plots determined the whole construction of the town. The front length of 100 feet could be subdivided in 4, 5, 6, or 8 parts — a system which still prevails today. The streets and the porticos which stood in front of the houses, were owned by the protector of trading rights, the emperor or his representative. Both street and porticos were therefore res publica destined for the market, for public affairs and for justice. The life of the city took place along the street: the town hall with its square was not built until the fifteenth century.

The Core and the Artists

Finally we may come back to our question: How can we build the core in the absence of a well-defined structure of society? There is certainly some relationship between the social structure of a city and the physical structure, or urban form, of its core. But one must issue a warning that this is not always strictly true.

It was all so easy in the old days — even in the nineteenth century! History was simple and so was physics: effect and cause in history, effect and cause in physics, effect and cause in psychology. It was the physical sciences that first abolished this rule, and today we are forced to recognize that the relation between the core of the city and the social structure of the city is not at all so simple and so rational as we once thought. It does not always obey the law of effect and cause.

Let me finish with a single example. It is a tragic example: Michelangelo's Capitol in Rome. The Area Capitolina occupies one of the hilltops of ancient Rome. It is composed of a complex of the square itself (which is not a real square, but more of a trapezoid); a broad ramped stairway (the Cordinata), and three buildings (the Senatorial Palace or town hall in the background, the Palazzo dei Conservatori on the right and the Capitolina Museum on the left).

The architectural composition of the Capitol can be rapidly summarized as a comprehensive development in depth: piazza, stairway and the relation with the old medieval city of Rome.

In 1530 the city-republic of Florence lost its independence to the Medici despot, Cosimo the First. Michelangelo came from an old Florentine family and, in 1534, he left Florence forever and spent the remaining thirty years of his life in voluntary exile in Rome. Here

he gave concrete reality to what he had derived from his youthful democratic experiences in Florence. Here, in the Rome of the Counter-Reformation, a Rome in which there was no freedom and no democracy. Michelangelo's Capitol — a very perfect expression of the core — was a symbol of the vanished liberties of the medieval city-republic that he held in his heart. It was, at the same time, a memorial to the tragic dreams of its creator.

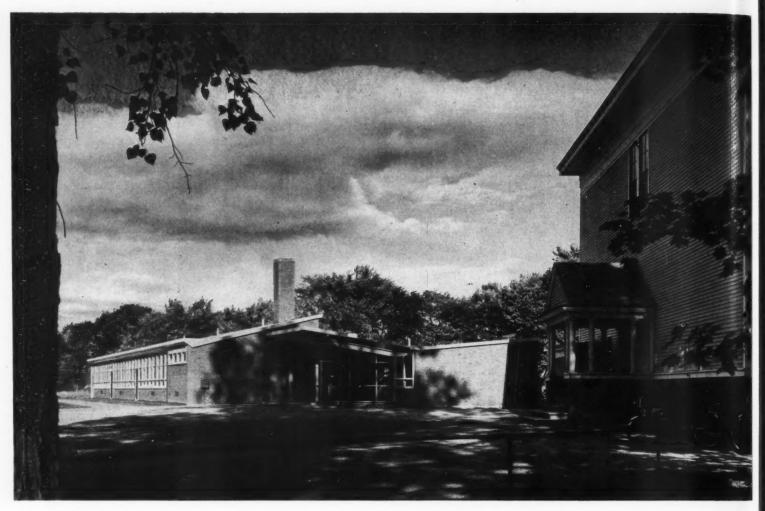
The lack of imagination usually shown today (though there are a few exceptions) in our attempts to devise new city centers — new city cores — is invariably excused on the ground that we no longer have a way of life that it is possible to express. What Michelangelo has mirrored in his Area Capitolina is the baffling irrationality of historic events and the enigmatic omission of any direct relation between effect and cause.* Once more we realize that a great artist is able to create the artistic form for a phase of future social development long before that phase has begun to take shape. This is our task today!

The square at St. Peter's, completed by Bernini, who erected the colonnades enclosing the piazza

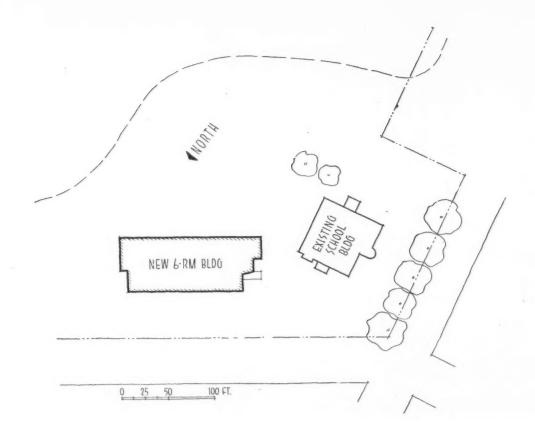




^{*} In the forthcoming 9th printing of Space, Time and Architecture this problem is treated more extensively.



Joseph W. Molitor



ADDITION TO

Facing page: northeast facade and old building. Sketch: west end is wood to simplify work of adding future classrooms. Right: lower panels of vestibule walls are safety glass



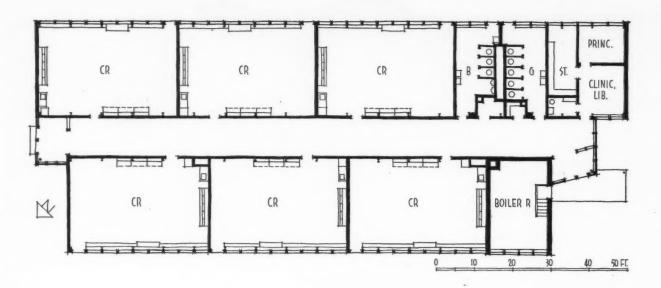


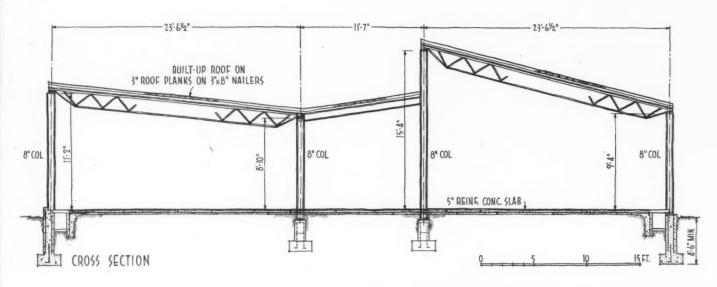
WASHBURN SCHOOL, AUBURN, ME.

Alonzo J. Harriman, Inc.

Architects and Engineers

In designing this school building the architects and engineers translated advanced architectural and educational thinking into a building for a specific climate and location. Maine has real winters. Folks there are traditionally cautious about spending money. The natural environment had to be controlled and a building and classrooms which would stimulate both children and teachers had to be produced without wasting money. The cost per classroom for this six-room structure was \$13,861; per student, the cost was \$462. Construction is simple: steel columns, with walls continuous outside them; open-web joists fully exposed, supporting an insulated wood-plank roof; and a concrete slab on grade.





Section above and photos at right show use of clerestory to admit sunlight to all rooms, even those which face almost due north. Entire structure can be comprehended at a glance; disposed in an orderly fashion, structural elements and mechanical and electrical runs are visible to a degree as satisfying as the vaulting of a cathedral, the half timber of medieval houses, or a beamed colonial ceiling







Joseph W. Molitor

Easel units, one for each classroom, were built locally for \$500 each. See details on following pages

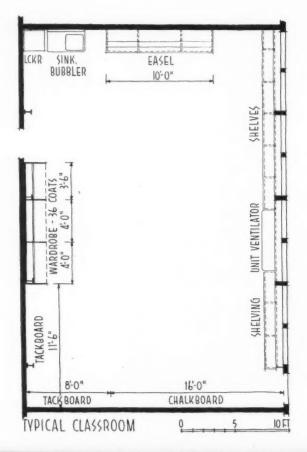


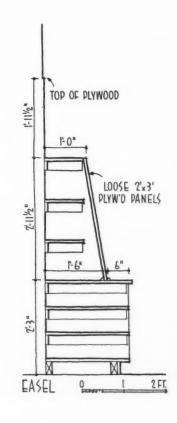


Toilets are blue and yellow, have ceramic tile floors and wainscots, wallhung fixtures to facilitate cleaning



In photo and details on this page, note classroom easel units





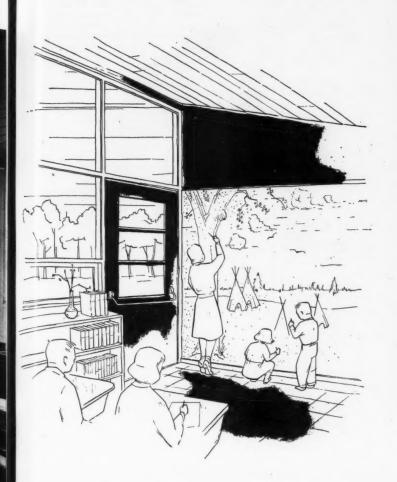
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ARCHITECTURAL RECORD

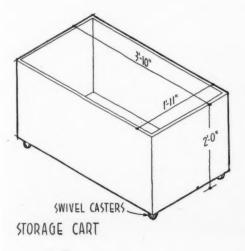


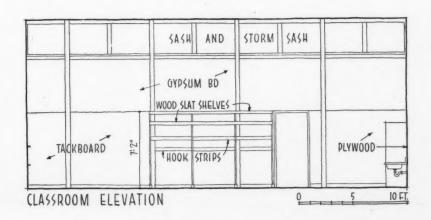


Joseph W. Molitor

Numerous things were done in Washburn School to make it a children's building. Children in the elementary grades which it houses have a love for strong color. At the same time optimum visual conditions demand light, highly reflective wall and ceiling colors which are, to children, scarcely color at all. Here, brilliant color is used sparingly against a light background. In each room one ceiling joist and column are painted a strong primary color; besides satisfying a psychological need, the color serves to delimit the portion of each room used as an

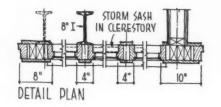
activity area. Ceiling and upper walls are white. Floors are concrete covered with gray asphalt tile. Wainscot, of light-toned hardwood plywood, and tackboards and chalkboards, are carried to the top of the door trim. Chalkboards, as shown in the sketch above, are carried from door-head full to the floor. At this age, children vary somewhat in height, and whatever their height they often sprawl on the floor to draw. Lengths of chalk tray are inserted into the board at convenient intervals. Tackboards also extend to the floor.

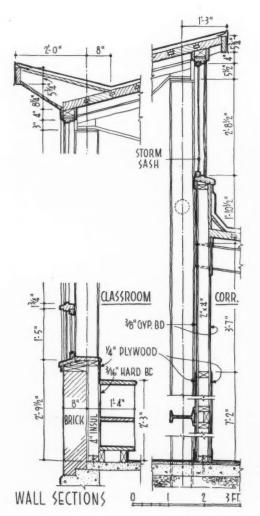




WASHBURN SCHOOL

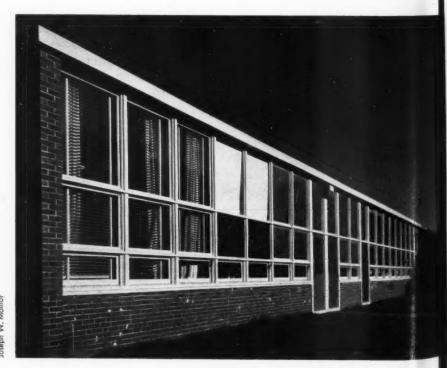
Artificial lighting is incandescent, with photo-electric cell controls which switch them on whenever daylight provides too little interior illumination. This relieves the teacher of the chore — often neglected — of controlling lights manually. Heating and ventilation are supplied by units under windows. Stale air is vented through the roof. The main steam supply, often buried in a floor trench, is here suspended on the wall of the north bank of classrooms beneath the clerestory. In this position its unavoidable emission of some heat is employed to minimize cold downdrafts from the high windows.



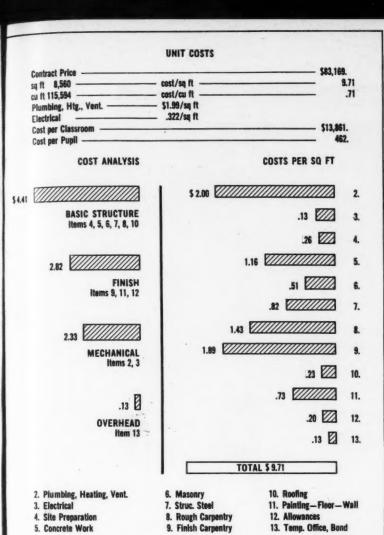




Exterior classroom doors are painted different primary colors, keyed to colors used inside. This helps each child identify himself with his room, and achieves the gaiety and brilliance of a toy



And the base of the same





Library-clinic anteroom (above) and principal's office are treated with color and furnishings to induce relaxation



APRIL 1952



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ARCHITECTURAL RECORD



Joseph Molitor

OFFICE FOR BESSEMER IMPROVEMENT CO.

Greensboro, North Carolina

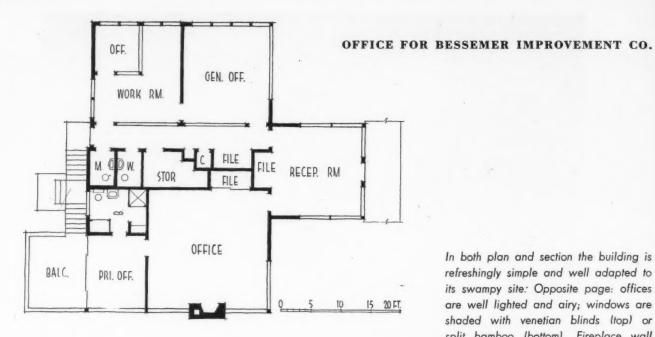
Edward Loewenstein, Architect

When the real estate and development company which owns this building chose the site for the project, it had two main goals in mind: to provide offices away from the center of town and to prove that low, swampy property could be used to good advantage. The site is in the midst of a large area owned by the Bessemer Company. Most of it was 8 ft below the street and several feet below existing sewers; it was partially wooded and generally under water during rainy seasons. Similar sites on the property were not saleable until this building had been completed and it had been proved that construction was possible without great expense and filling.

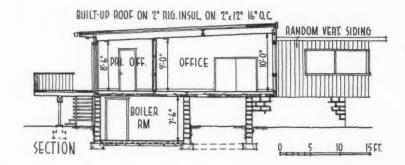
The original plan was to place the building on a single, central column enclosing the services. The owner considered this too radical, however, and suggested four columns. A block foundation finally was adopted after it had been decided to provide space for heating and air conditioning, plus a garage-work shop at ground level. The original contours of the site were preserved, which is expected to permit easy landscaping and planting in the future.

Half of the building is given over to a private office suite which includes the owner's office, storage space, lounge and light lunch facilities, and a screened sun deck where business may be transacted in good weather. The other half of the building consists of offices for the development company's staff.

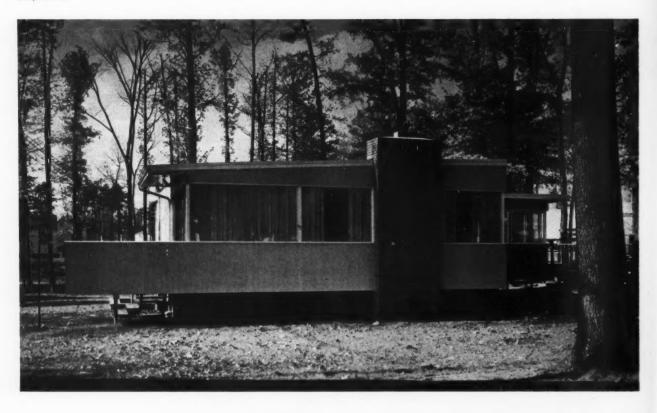
Foundation is concrete block, framing is wood stud. Exterior walls are random width pine, painted. Interior walls are plywood, floors are rubber tile over wood, ceilings are acoustical cane fiber tile.



In both plan and section the building is refreshingly simple and well adapted to its swampy site: Opposite page: offices are well lighted and airy; windows are shaded with venetian blinds (top) or split bamboo (bottom). Fireplace wall has marble inserts

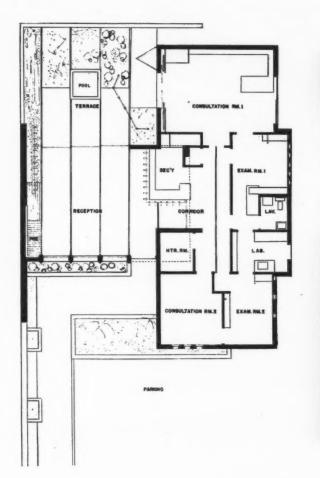


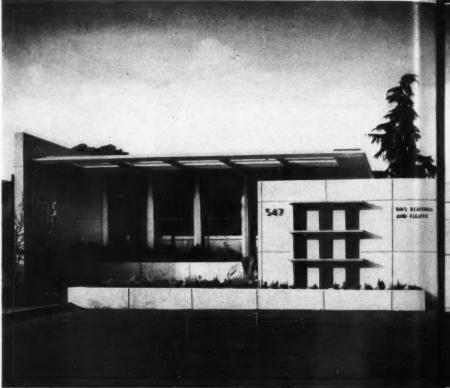
Joseph Molitor













Att. Chi. Salan



MEDICAL BUILDING FOR PAUL C. BLAISDELL, M.D.

Pasadena, California

Smith and Williams, Architects

THE TWO DOCTORS who share this building are specialists who spend about half the day in hospitals, and the other half in their own offices and consultation rooms. For their non-hospital hours they were anxious to secure as pleasant and relaxing an environment as possible.

Thanks to Pasadena's mild climate, a good part of the reception area could be in a walled garden, outside the building proper. Identical paving, plaster soffit wall finish and lattice work were used in both the garden and the indoor reception room to make them visually one continuous area.

The architects tried consciously to express on the

exterior of the building the difference in use and character between the reception and consultation wings. The former is almost wholly of glass, the latter is almost solid masonry, with natural light filtered into the examining rooms through grills formed by glass brick spaced separately in a pattern on the concrete walls.

The building is located in the center of a busy medical district and for that reason was set far back from the street to permit on-site parking for five cars. Air conditioning is controlled by both clock and thermostat, and music is piped to all rooms from an LP record player located near the secretary's desk (photo, page 145).



Screens, glass block and clear glass are used as interior partitions wherever possible throughout the reception area; ceilings are high, furniture arrangement is informal. Within the limits of the local fire code, this entire area is a glass enclosure, contrasting strongly with the privacy of the examination and consultation rooms. The "cold, clinical look" has been avoided everywhere, despite the fact that the entire building was planned for the efficient use of the latest developments in medical equipment and technique.

Informality of reception area is accentuated by corner fireplace in enclosed portion (above), small pool and cloth "ceiling" in garden portion. The larger of the two consultation rooms (page 146) opens to garden





Julius Shulman

Secretary's office is at almost dead center of the building, between reception area and consultation rooms. Location permits secretary to keep her eyes on entire building, and be instantly available to both patients and doctors; screening of her cubbyhole makes her presence unobtrusive

MEDICAL BUILDING



Julius Shulman

Larger consultation room (above) opens to garden, has built-in desk and cabinets. Examination rooms (one at right) are day lighted by glass block, separated by lavatory and laboratory







R. L. Copeland

HAYWARD PUBLIC LIBRARY

On APRIL 7, 1951, the town of Hayward, California, proudly dedicated its new Public Library "to enrich personal life and enlighten the citizens." The library, as an institution, was then some 55 years old: it was started as a reading room back in 1896; two years later it was formally established as a library in a small storeroom in the center of what was then the village of Hayward; by 1905 it was supported by the town and had a building of its own — a building which served the community until the end of 1948.

The new library was planned as part of the City Hall Plaza. Because its site is in a public park opposite the City Hall, the architect felt that the exterior design must blend well with a park setting. That it does exactly that is apparent in the air view above. The hip roof, with a 5-ft overhang, is of red mission tile, chosen for its rich color and texture; beneath it is a thoroughly modern library designed on modular lines.

The structural frame is steel and concrete, spanning the full width of the building; with the exception of Hayward, California

John Carl Warnecke, Architect

Thomas D. Church, Landscape Architect







andal Partrid

Main reading room (opposite) lies between lecture room (background, above) and children's reading room (background, below). Charge desk is strategically located for control of entire building







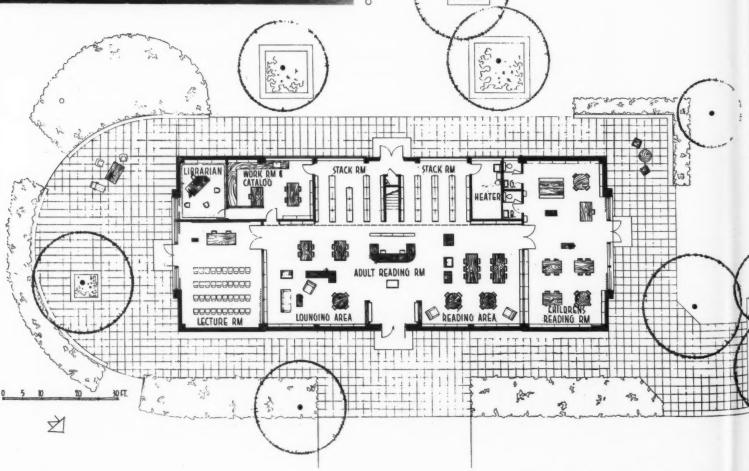
HAYWARD PUBLIC LIBRARY

the mezzanine, all partitions are non-bearing to provide almost complete flexibility in plan. At each end of the building is a floor-to-ceiling window approximately 24 by 16 ft in size; these huge windows, plus the clear glass of interior partitions, bring a view of the park to every part of the building.

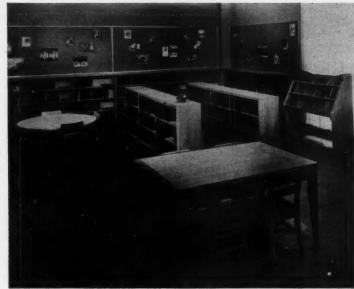
Furniture and draperies were carefully planned to harmonize with the interior color scheme. Furniture is of light bleached oak to blend with the buff walls; arm and side chairs are upholstered in olive green leather; the floor-to-ceiling curtains between lecture room and main reading room are a light olive green.

The lecture room was one of the main requirements of the library board and the librarian: needed for lectures and showings of movies and slides, it had to be completely cut off from the adult reading room. Both it and the children's room at the opposite end of the building have separate entrances.

The building is concrete and brick on concrete foundation. Floors are cork and asphalt tile, ceilings are acoustic tile.







Courtesy Remington-Rand Inc.

Children's reading room (above) has low shelves, generous bulletin board space, and informal arrangement of furniture

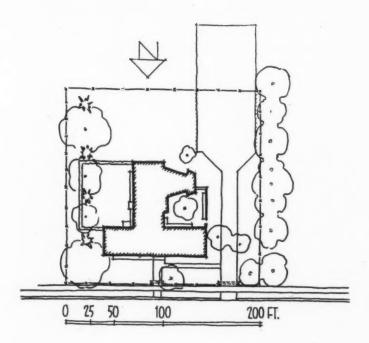
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APRIL 1952









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HARMON PARK LIBRARY

Phoenix, Arizona

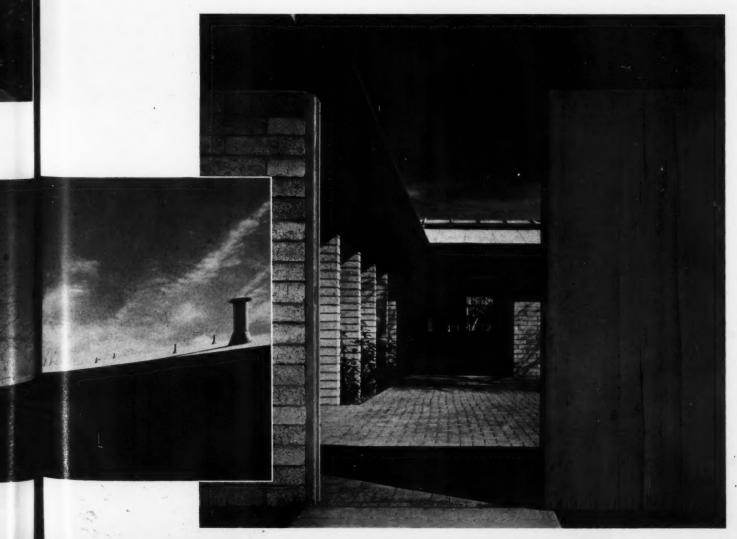
Guirey & Jones, Architects

Alfred Morton Githens, Consulting Architect

Because the site of this small library is in a municipal park, the owner specifically requested that the building be kept informal in character and residential in scale. Facilities required were: adult and children's reading rooms, each with an outdoor patio; a record-playing room; a meeting room for book discussions and movies; a work room; a staff room which could also be used for small group meetings; and a kitchen to serve both the staff room and the children's patio. The meeting room was to be so located that its capacity could be considerably enlarged by opening it

to the children's reading room. These various facilities, furthermore, plus the washrooms, must all be within visual control of a single librarian.

Around these exacting requirements the architects designed a simple and pleasing building, one story in height, with hipped roof and wide overhang to keep out the hot Arizona sun. Walls are reinforced pumice block masonry carrying a rigid frame; roof is exposed steel bents. The reading rooms are tri-laterally lighted, with shaded skylights. The building is fully insulated, and air cooled.



HARMON PARK LIBRARY



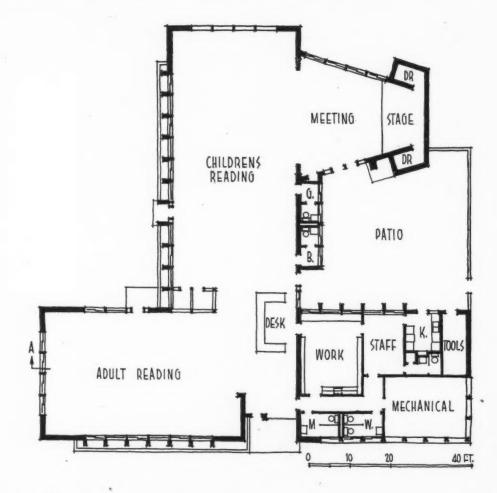


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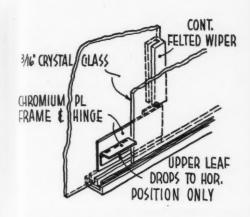
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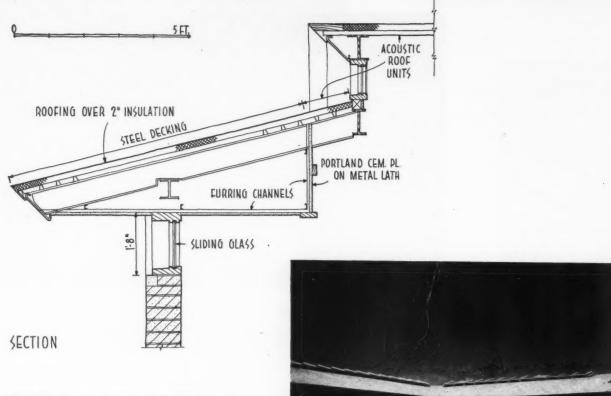






Capacity of meeting room (above) can be about doubled when folding doors between it and children's reading room are opened. Charge desk (below) is close to main entrance, and so located that from it the librarian can watch over entire building — patios included. All windows have movable panels (photo and detail above left) with metal inserts and drop-hinges which double as stops and handles





Stuart A. Weiner

Reading rooms receive more than usual amount of daylight, but are kept cool none-theless: skylights are shade-screened, and glazed with heat-resistant glass; roof is insulated with 2 in. of glass fiber and topped with white asbestos. Roof decking is of acoustical units in reading rooms, standard steel elsewhere



Chicago, Illinois

Shaw, Metz and Dolio, Architects

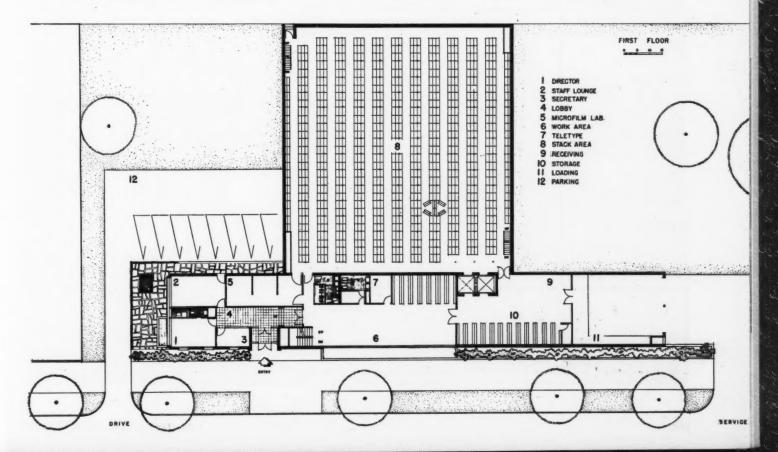


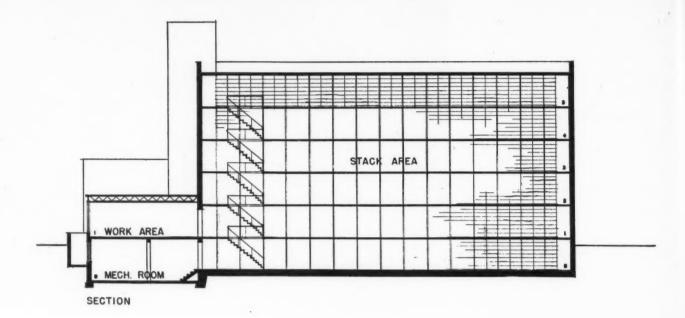
MIDWEST INTER-LIBRARY CENTER

Not in the strict sense of the word a library, this unusual building was sponsored by a group of midwestern universities as a cooperative deposit and research center (Architectural Record, June 1950, pp. 143–145). The University of Chicago contributed a 320 by 130 ft site on the edge of its Chicago campus; the Carnegie Corporation and the Rockefeller Foundation provided grants for the first unit of the project.

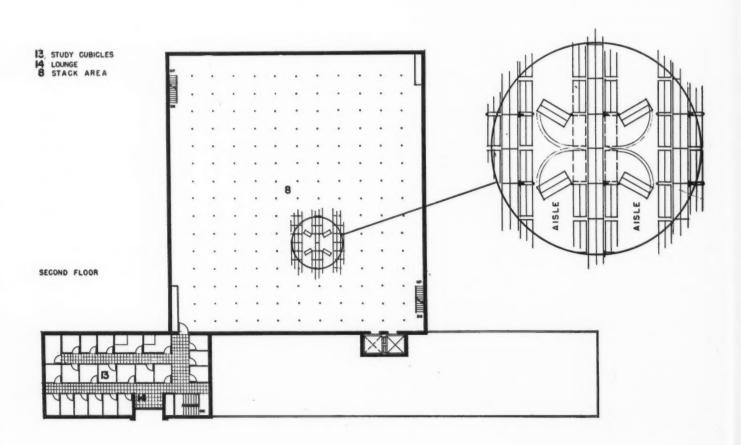
The building is predominantly a gigantic stack area.

In its present phase it can accommodate $2\frac{1}{4}$ million volumes; the addition of three similar stack areas eventually will bring its capacity up to 10 million. Service facilities adequate for the entire project are provided in the two-story service wing. These include: provision for truck transport of incoming and outgoing books for the member universities; work areas for receiving, cataloging and filing; offices; carrels or study-cubicles; teletype room and microfilm laboratory.





A unique feature of the building is the "triple sandwich stack" scheme shown below and top opposite. Three double-faced stacks are placed together, the center one fixed and the two exterior ones pivoted. This system, possible because general public does not enter the area, greatly increased the volume-per-cubic-foot ratio and permitted wide 3 ft 4 in. aisles. Elevators servicing the stacks are outside the stack area; access corridor will connect them with future parallel stack areas





drich-Blessing

Service wing is entirely air conditioned; stacks are not cooled, but conditioned with filtered air kept at comfortable temperature and book-preserving humidity





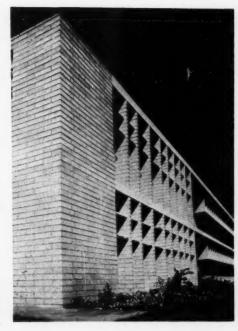


KALIHI-PALAMA BRANCH, LIBRARY OF HAWAII

Honolulu, T.H.

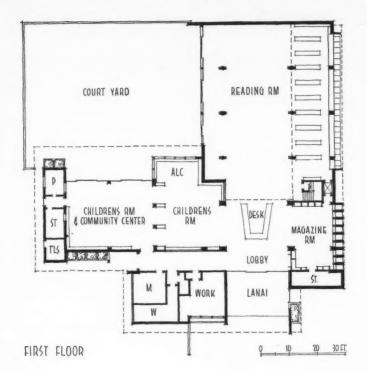
Fisk, Johnson, Ossipoff & Preis, Architects

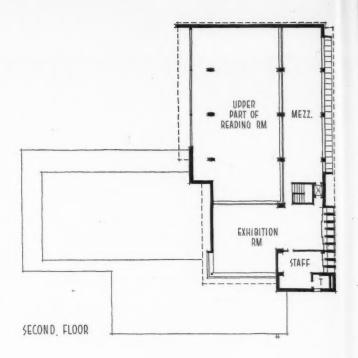
Vladimir Ossipoff, Coordinator





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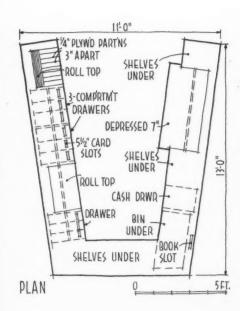




EVERYTHING about this branch library in Honolulu suggests coolness and pleasant informality. As few partitions as possible are used to separate the various departments; the high-ceilinged main reading room and the combination children's room-community center both open to the patio. The cement block and brick of the interior are cool materials both visually and actually.

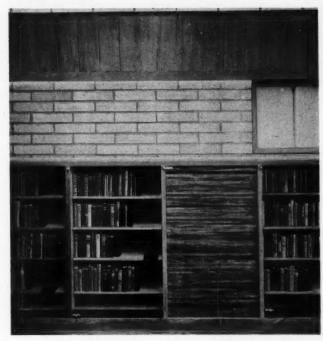
Bright colors are used throughout, particularly in the upholstered furniture, tables and lamps in the main reading room. The patio — an outdoor reading room — is gay with colorful umbrellas and chairs, a fish pond, and tropical planting.

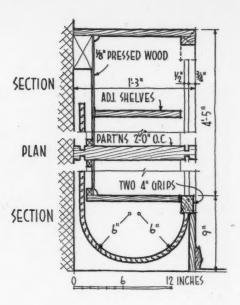
Sun control was a vital part of the planning, since during the spring months the sun would shine through







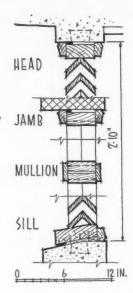




The architects designed much special furniture for the library, such as the spacious and efficient charge desk (opposite page), and the rolltop book and storage shelves (left and above)



KALIHI-PALAMA BRANCH, LIBRARY OF HAWAII

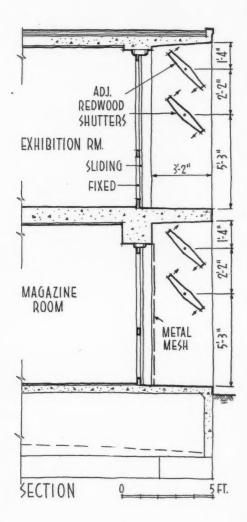


Fixed louvers at windows (above) and adjustable shutters along east wall provide ventilation and sun control. Floors throughout are cement and cork, ceilings are acoustic plaster

the building on an almost horizontal line after three in the afternoon. The east wall, therefore, has adjustable wood louvers along its entire length (detail below). Louvers are used also for ventilation above the doors between the main reading room and the patio, and above and below many of the windows.

Interestingly, the unbroken expanse of exterior wall was planned as an outdoor exhibit area.







SIMPLE DESIGN FOR SOUTHERN LIVING

Residence for Dr. Ann Stuckey Griffin, Georgia

Aeck Associates, Architects

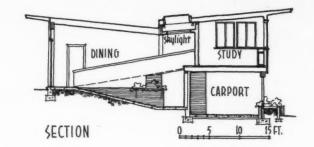
THE QUIET, UNOBTRUSIVE CHARACTER of this house set in a grove of pines somewhat belies a skillful handling of its structural and design elements. Use was made of the sloping site to divide the plan into three sections: on the lower level are the utility areas - boiler room, storage, carport, entry — and a short flight of outside steps to the kitchen; on the main level are the living areas, flanked by kitchen and guest room; at the top level is a suite for the owner which can be closed off for privacy and a sense of security. All levels are connected by ramps, frankly used to provide a gracious entrance, and in this case fitted in without an extravagant waste of space. The structure uses brick in all lower sections, with lighter-weight pine boards on second floor exteriors and above most of the window openings. The butterfly roof with its wide overhangs permits larger, and protected, fenestration for major rooms.

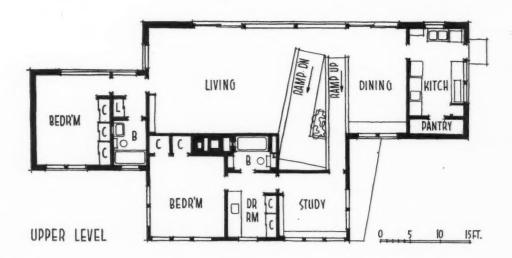


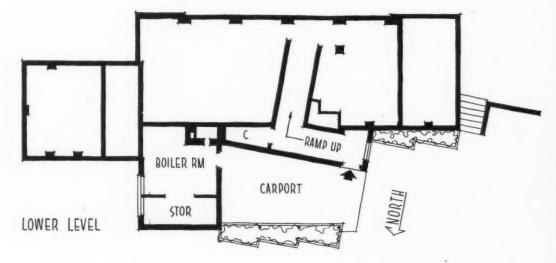


DR. ANN STUCKEY RESIDENCE

The property slopes up a half-story in the width of the house, gives ground level entrance to all rooms but owner's suite. Heating is by a hot water radiant system in the ceilings







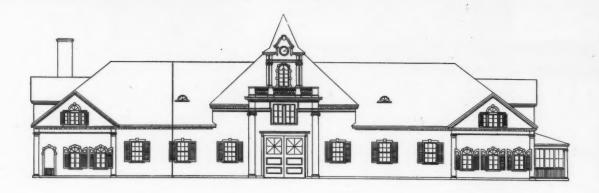


Living area (below) has generous scale, great sense of spaciousness. Ramps have skylight above, serve to separate sitting and dining areas. Interior walls are painted plaster



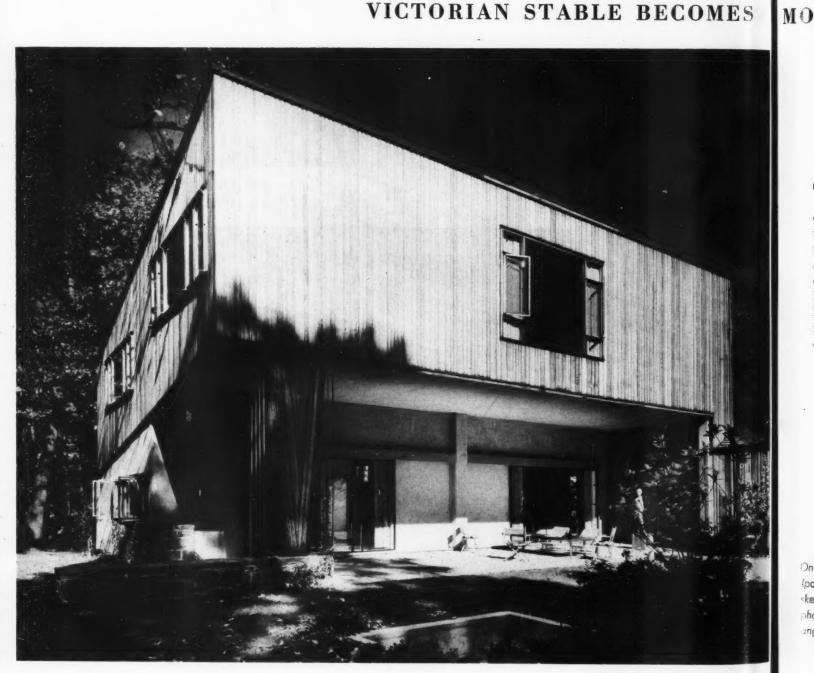
Richard Garrison





VICTORIAN STABLE BECOMES

House



Ben Schnall

House for Mrs. Alma Morgenthau

Lattingtown, Long Island, N. Y.

Herman Herrey, Architect

MODERN HOUSE

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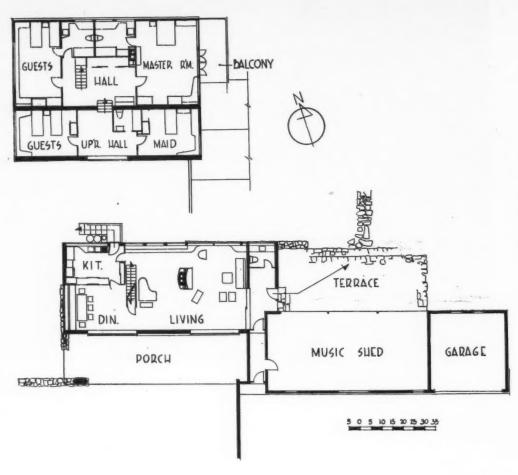


This striking adaptation of part of a Victorian stable for contemporary residence is the result of a series of carefully considered compromises between the qualities of the original building and those desired in the remodeled house. At the beginning of the project, the architect found himself confronted with sections of a dilapidated but still pretentious stable- and carriage-hall building, located in the midst of a lovely old park. The land had been divided through the center of the building, and the middle hall demolished. Both architect and client felt that the original structure had a pleasant

mellowness, "a composite of age, weather, wear and patina that can go far in compensating for architectural deficiencies in an old house." It was reasoned that this quality "explains why sensitive people accept as greatly pleasing things that they might not tolerate in a fairly new building." Thus a conscious, deliberate effort was made to preserve this atmosphere — especially in the choice of materials and finishes — without any sacrifice of plan or design efficiency. The result is a fresh design that should not have to depend on a state of newness for effect.

Only the southern wing of the stable lportion to left of vertical line in sketch) was used in final house; photo at upper right is from same angle as the drawing





The main portion of the house was adapted from the carriage hall, retained only major parts of structure. Music shed and garage were transformed with only minor alterations from stable wing. House is site of annual Locust Valley Music Festival

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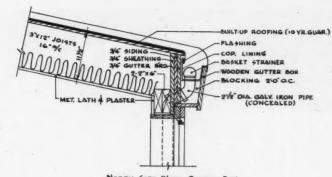
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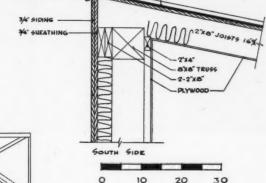
Ben Schnall



It was desired to save as much as possible of the original structure for economy. The complicated roofs, however, were completely out of scale with the revised design, and were removed except for one large truss on the south. This was refashioned into a rectangular truss, and a simple built-up roof was sloped from it down to the north (see eave details at right - scale is in inches). Problems were also posed by the existence of four different floor levels. These were solved by converting the high-ceilinged, concrete-floored space to the south into an open porch, and by sloping the redwood siding of the upper story to conform with the 3 ft difference in floor level. The lower floor exterior was left stuccoed as it had been before. Interior partitions were rearranged to provide a convenient plan. All mechanical equipment is new, and is kept simple and unobtrusive.

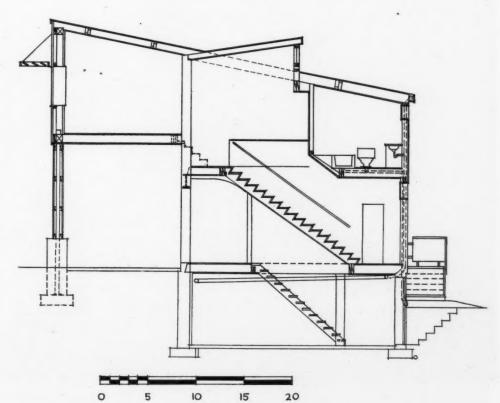


NORTH SIDE WITH GUTTER BOX

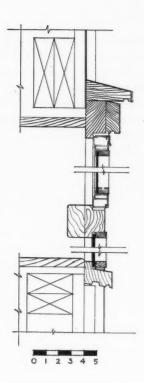


The original variations in floor levels were retained for economy. West elevation of upper floor was sloped to unify the two different levels. A rectangular truss, refashioned from an existing truss,

spans new porch





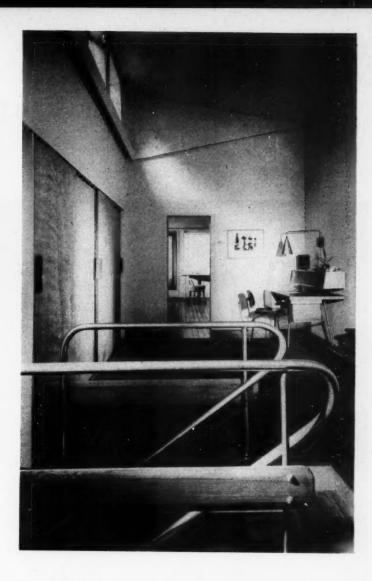


The living area (above and below) was planned to permit entertaining of large groups; broad windows open on park. Both fixed and metal casement windows have wood surrounds for uniformity, as in kitchen window detail above right (scale is in inches)





The existing stairs were opened up toward living and dining spaces, with a new railing planned to make rooms seem as open as possible. Large central hall on second floor (right) is lighted by dormer windows, has bank of storage closets. Interior walls are plaster, floors maple



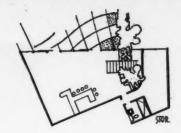


MAXIMUM USE OF ODD-SHAPED



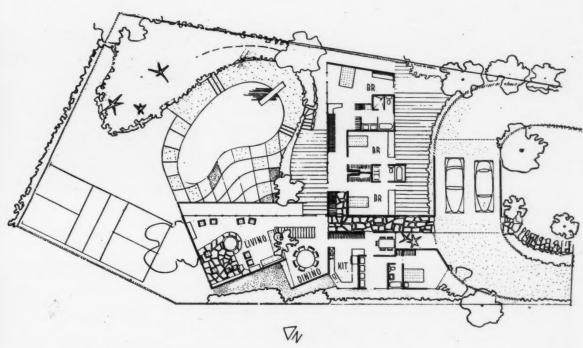
Residence for Mr. and Mrs. Elliot Handler, Los Angeles, California
Kenneth N. Lind, Architect

2-LEVEL SITE



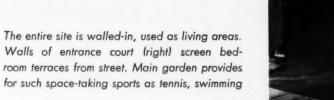
Main floor plan is shown below, lower level recreation room plan at left. Staggered walls extend vistas from dining area and kitchen





A LOT of ingenuity was used in planning this house for its odd-shaped, two-level site in a rather crowded residential area. The clients wanted as much space and privacy as possible, both indoors and outdoors, for the family activities, and space for entertaining business associates. To achieve these objectives, the architect used the natural drop in site level to divide the one-story sleeping and service section from the two-floor living wing. It also serves as an exterior transition from the upper levels to the walled-in garden below. All major rooms open directly to the outside, and have windows shielded from immediately adjoining properties.

Julius Shulman





The structure of the house is wood frame on concrete foundations. Exterior walls are stucco, or redwood stained and oiled; the roof is surfaced with $2\frac{1}{2}$ - to 3-in. terra-cotta-colored granules. Considerable use is made of rough stone for walls and terraces, and the stone is continued into the recreation room together with planting (see photo below) to visually tie it in with outdoor areas. Interior walls are plaster, mahogany plywood or random pine strips. Ceilings are lightweight aggregate plaster or exposed tongue-and-groove sheathing. Roof areas over exposed beamed ceilings are thermally insulated with a 2-in. layer of poured lightweight aggregate.

Heating is by a hot water radiant system installed on top of wood floor framing. Coils are imbedded in a 1½-in. layer of concrete, separated from the wood by a membrane. The concrete also stiffens floors, reduces squeaks and spring.



Julius Shulman

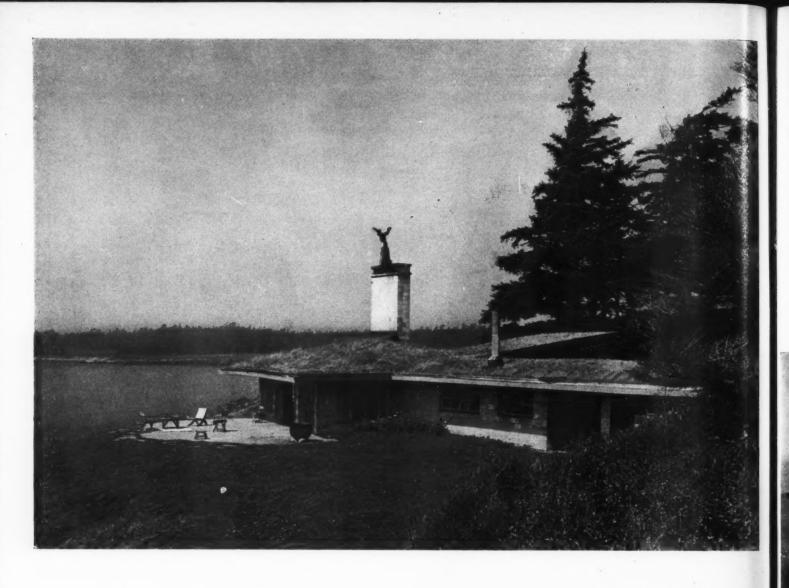




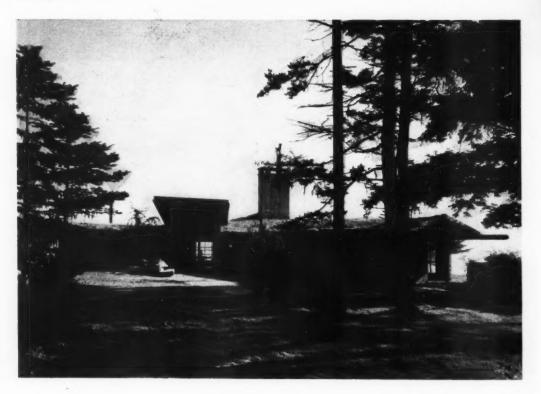
Living areas on the upper level form large, open room with suggested divisions: general sitting area (above) is separated from book area by raised stone floor flanking central fireplace; from dining area (above left) by stairwell and railing. All rooms open to out of doors, including bedrooms and kitchen







Charles R. Pearson



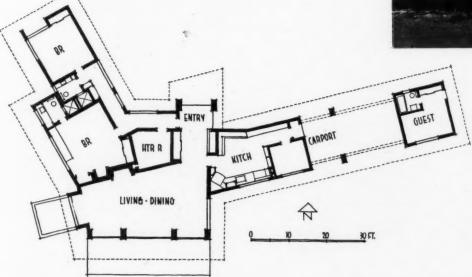
ISLAND WEEK-END HOUSE FOR ALL-YEAR USE

Country House for Mr. Richard Lea Lopez Island, San Juan Group, Washington Lionel H. Pries, Architect A DRAMATIC, isolated site which faces an often-stormy strait affords the owners of this house a retreat from the bustle of Seattle, 100 miles away. Designed for year-round week-end occupancy, the house is set off by half-mile stretches of beach on either side and by heavy woods behind. It is constructed of concrete block, clear-finished on the exterior, painted on the interior. Floors are tobacco-brown concrete and ceilings are clear-lac-quered cedar. The sodded roof, which helps tie the low-spreading house to its setting, never needs trimming, since salt spray breaking over it stunts the native grasses and Japanese Iris with which it is planted.



Casual nature of house is pointed up by decorative effects, including painted motif on underside of entry and copper "thunderbird" sculpture atop chimney





ISLAND WEEK-END HOUSE



Simplicity of interior offers pleasant, effective contrast to the dramatic site, as in entry, above. Living room, above right and below, has glass doors leading to terrace, can be thrown open to breezes from the sound



Charles R. Pearson



HOSPITALS

ARCHITECTURAL RECORD'S BUILDING TYPES STUDY NUMBER 185

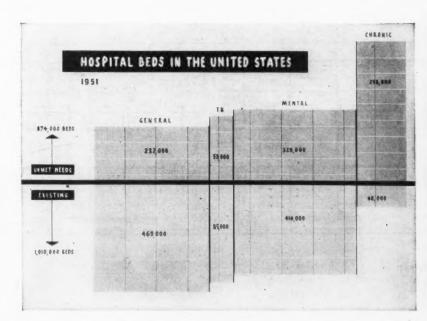
TEN BILLION DOLLARS worth of hospital construction is still required to satisfy the nation's needs for medical care. According to the U. S. Public Health Service, we now have around a million acceptable hospital beds, with 874,000 beds still needed. At current per-bed costs, \$10,000,000,000 is probably conservative.

Since 1947, when the Hospital Survey and Construction (Hill-Burton) Act became effective, a systematic state-by-state inventory of hospital facilities has been taken, and a sizeable start made on building of needed hospitals and public health centers. The chart below shows what proportion of total bed requirements have been met, and how much building remains to be done.

In terms of new hospital construction yet to come, the chart figures mean that there is still much to be done in general hospitals, especially in small communities, but the program will gradually shift toward mental hospitals, then later toward chronic disease hospitals.

New and Revised Hospital Elements

"Elements of the General Hospital," a series of planning aids prepared for hospital architects by Marshall Shaffer and his staff at the U. S. Public Health Service, was published in Architectural Record in 1946; since then something like fifty thousand reprints have been distributed. In intervening years many of the elements have been revised in accordance with changing hospital practice, and many new plans have been added. The first dozen pages of this Building Types Study bring the series up to date, include all of the revisions and additions. As before, these are not intended to be arbitrary or restrictive; rather they represent a convenient method of showing important planning considerations, not forgetting major items of equipment shown in place.





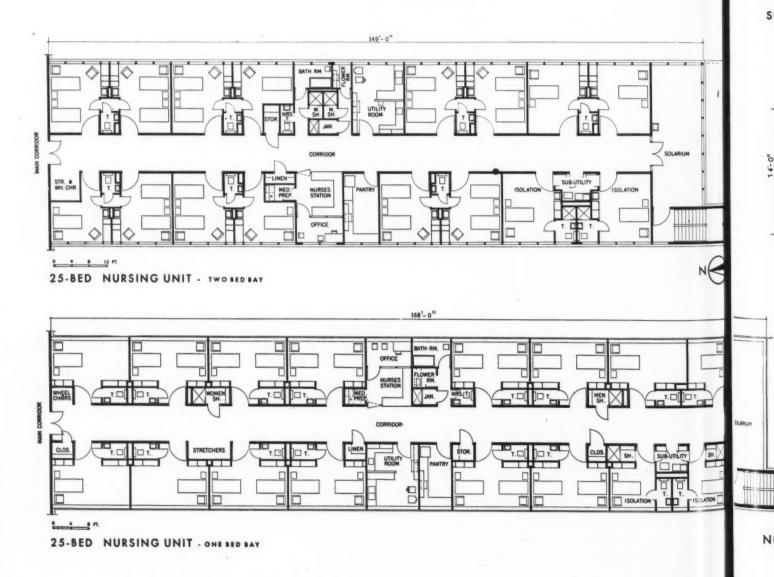
NEW AND REVISED ELEMENTS OF

By Division of Hospital Facilities

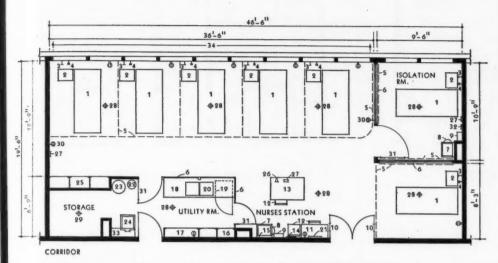
U. S. Public Health Service

Federal Security Agency

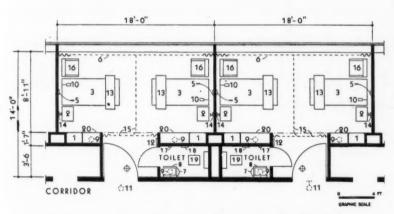
NURSING DEPARTMENT



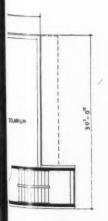
THE GENERAL HOSPITAL



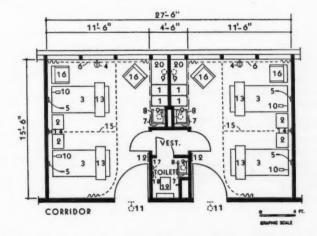
SURGERY RECOVERY ROOM FOR A 200-BED GENERAL HOSPITAL



TYPICAL PATIENTS' ROOMS (TWO-BED BAY)



OF





TYPICAL PATIENTS' ROOMS (ONE-BED BAY

SURGERY RECOVERY ROOM

- 1. Adjustable hospital bed
- 2. Bedside cabinet
- 3. Oxygen outlet, 5 ft 3 in. above floor
- 4. Suction outlet, 5 ft 3 in. above floor
- 5. Cubicle curtain
- 6. Partition to ceiling, glass 40 in. above floor to 7 ft above floor
- 7. Lavatory with gooseneck spout and knee or elbow control
- 8. Waste paper receptacle
- 9. Paper towel dispenser
- 10. Vision panel
- 11. Table
- 12. Straight chair
- 13. Executive type desk
- 14. Clock
- 15. Mirror
- 16. Locked wall cabinet with inner locked narcotic compartment and inside light
- 17. Shelf 12 in. wide, 38 in. above floor with cabinets above and below
- 18. Work counter 2 ft 4 in. wide, 38 in. above
- 19. Refrigerator under counter
- 20. Double compartment sink, one comp. 6 in. deep, the other 10 in. deep, gooseneck spout
- 21. Bulletin board
- 22. Sanitary waste receptacle
- 23. Laundry hamper
- 24. Clinical sink with bed pan flushing attachment
- 25. Storage cabinet
- 26. Telephone outlet
- 27. Nurses call with emergency call button with duplex receptacle
- 28. 500 watt indirect lighting units
- 29. 200 watt semidirect lighting unit
- 30. Single receptacle 30 amp
- 31. Glazed door
- 32. Hook strip
- 33. Shelf 48 in. above floor
- 34. Window sills approximately 6 ft above

TYPICAL PATIENTS' ROOMS

- 1. Built-in locker
- 2. Bedside cabinet
- 3. Adjustable hospital bed
- 4. Duplex convenience outlet
- 5. Nurses' calling station with duplex receptacle
- 6. Sliding window curtain
- 7. Waste paper receptacle
- 8. Lavatory with gooseneck spout and knee or elbow control
- 9. Wall bracket light, switch controlled
- 10. Bed light
- 11. Corridor dome light
- 12. Night light, switch controlled
- 13. Over bed table
- 14. Telephone outlet and duplex receptacle
- 15. Cubicle rod and curtain
- 16. Easy chair
- 17. Nurses calling station (push button type)
- 18. Grab rai
- 19. Water closet with bed pan lugs and bed pan flushing attachment
- 20. Built-in dresser

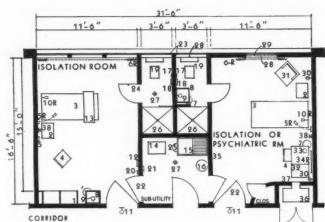
NURSING DEPARTMENT

12-6

ISOLATION OR

4R 330 Da TOILET

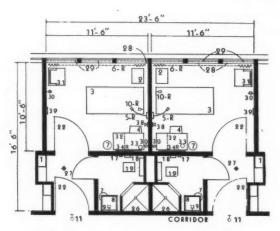
31-6



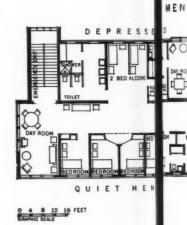
ISOLATION AND PSYCHIATRIC ROOMS ISOLATION AND PSYCHIATRIC ROOMS







PRIVATE SPECIAL TREATMENT ROOMS



SOLATION OR SYCHIATRIC RM

30 34 R 33 7

ISOLATION AND PSYCHIATRIC ROOMS Note: All numbers noted with "R" denote that the items shall be removable.

- 1. Built-in lockers
- 2. Bedside cabinet
- 3. Adjustable hospital bed
- Straight chair
- 5R. Nurses calling station with duplex re-ceptacle, contagious type
- 6R. Sliding window curtain
- Waste paper receptacle
- 8. Lavatory with gooseneck spout and knee or elbow control
- 9. Wall bracket, switch controlled
- 10R, Bed light
- 11. Corridor dome light

- 12. Night light, switch controlled
- 13. Over bed table
- 14. Utensil sterilizer 20" x 20" x 24"
- 15. Sink and drainboard
- 16. Linen hamper
- 17. Nurses calling station (push button type)
- 18.
- 19. Water closet with bed pan lugs and bed pan flushing attachment
- 20. Hook strip
- 21. Dome light and buzzer, 5' 6" above floor
- 22. View panel with heat tempered glass approx. 8" x 12" and 4' 6" from floor
- 23. Obscure glass
- 24. Coat hook

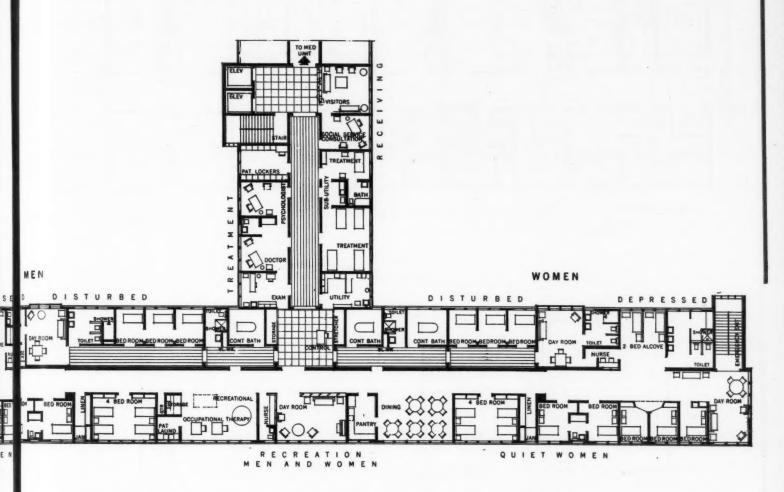
- 25. Sanitary waste receptacle
- 26. Shower
- 27. Ceiling light
- **Detention screen**
- 29. Shutter
- 30. Duplex receptacle
- 31. Easy chair
- 32. Desk
- Desk lamp
- 34R, Mirror
- 35. Night light with heat tempered glass and switch controlled from sub-utility

0

8 12 16 FE

GGES DIST

- 36. Air-conditioning unit.
- 37. Supply and exhaust openings with grille
- 38. Telephone outlet and duplex receptacle



SUGGESTED PLAN OF PSYCHIATRIC WARD FOR THE GENERAL HOSPITAL

FOR DISTURBED, QUIET AND DEPRESSED (MEN AND WOMEN)

CAPACITY 30 PATIENTS

WING 1

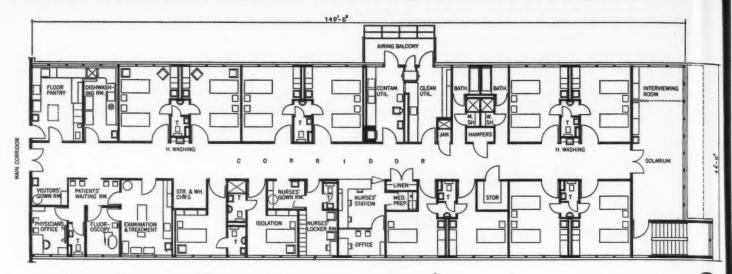


GGESTED TYPE PLAN OF PSYCHIATRIC WARD FOR THE GENERAL HOSPITAL

PDISTURBED, QUIET AND DEPRESSED (MEN OR WOMEN) CAPACITY 20 PATIENTS

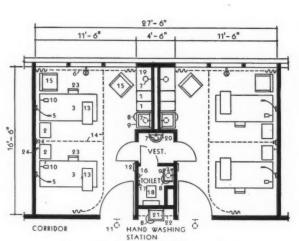
WING 2

NURSING DEPARTMENT, TUBERCULOSIS HOSPITAL

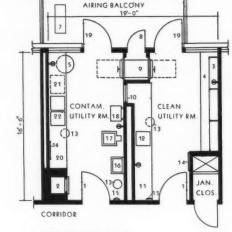


20-BED TUBERCULOSIS NURSING UNIT FOR A GENERAL HOSPITAL

PRIVATE AND SEMI-PRIVATE ROOMS WITH CONNECTING TOILETS - TWO BED BAY



TYPICAL SEMI-PRIVATE ROOMS WITH CONNECTING TOILET



UTILITY ROOMS

TYPICAL SEMI-PRIVATE ROOMS

- 1. Built-in locker
- 2. Bedside table
- 3. Adjustable hospital bed
- Telephone outlet and duplex receptacle
- 5. Nurses' calling station with duplex receptacle
- 6. Sliding window curtain
- 7. Wall bracket light, switch controlled 8. Waste paper receptacle
- 9. Lavatory with gooseneck spout and knee or elbow control
- 10. Bed light
- 11. Corridor dome light
- 12. Night light, switch controlled
- 13. Over-bed table
- 14. Cubicle rod and curtain
- 15. Easy chair
- 16. Nurses' calling station (push button type)
- 17. Grab rail
- 18. Water closet with bedpan lugs and bedpan flushing attachment
- 19. Built-in dresser
- 20. Dental lavatory
- 21. Scrub-sink with gooseneck spout and knee or foot control
- 22. Shelf above scrub sink
- 23. Straight chair
- 24. Oxygen and suction outlets, 5 ft 6 in. from floor

UTILITY ROOMS

- 1. Vision panel
- 2. Incinerator 3. Wall cabinet

- 4. Counter, 36 in. high, with cabinets below
 5. Laundry hamper
 6. Mattress airing rack
 7. Drying rack
 8. Access door
 9. Sterilizer with double doors, 24 by 36 in.
 10. Pass window
 11. Counter, 36 in. high, with open shelf below
 12. Sink in counter with gooseneck spout and foot or knee control
 13. Waste paper receptacle
 14. Bulletin board, 26 by 24 in.
 15. Domelight and buzzer set, 5 ft 6 in. from floor
- floor
- 16. Scrub sink with gooseneck spout and foot or knee control
 17. Clinical sink

- 17. Clinical sink
 18. Hot plate, double element, on bracket
 19. Glazed door
 20. Counter, 36 in. high with open shelf below
 21. Cracked ice bin (for external use only)
 22. Built-in double compartment sink

NURSES' GOWN ROOM, ETC.

- Counter 36 in. high with shelving under sink for medicine trays
 Medicine sink in counter with gooseneck

- Medicine sink in counter with gooseneck spout
 Refrigerator under counter
 Instrument sterilizer, 3 by 3½ by 8½ in.
 Wall cabinet with inner locked narcotic compartment and inside light
 Counter, 30 in. high, open below
 Dutch door with lock
 Straight chair
 Waste paper receptacle
 Domelight and buzzer set, 5 ft 6 in. from floor

- floor
- 11. Pigeon-hole form rack 12. Chart rack

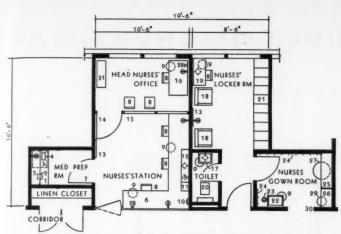
- 13. Bulletin board, 26 in. by 24 in.14. Glazed door15. Glazed partition16. Desk

- 16. Desk
 17. Lavatory with gooseneck spout and knee or elbow control
 18. Easy chair
 19. Counter with mirror above
 20. Water closet
 21. Lockers, full length
 22. Scrub sink with gooseneck spout and foot or knee control
 23. Soap dispenser with foot control
 24. Hook strip with name plates above hooks
 25. Wall cabinet for clean gowns
 26. Shelf for clean mask container and forceps jar, mirror above shelf
 27. Laundry hamper
 28. Telephone outlet
 29. Receptacle for contaminated masks
 30. Trimmed opening

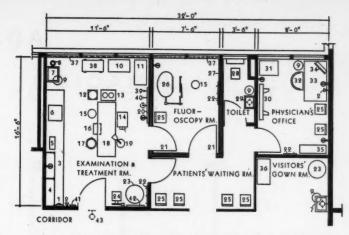
EXAMINATION AND TREATMENT ROOM, ETC.

- Domelight and buzzer set, 5 ft 6 in. from floor
 Telephone outlet
- Counter, 36 in. high, with cabinets below Wall cabinet Instrument sterilizer 17½ by 7½ by 6

- Built-in instrument sink, with gooseneck spout and foot or knee control
 Scrub sink with gooseneck spout and foot or knee control
- 8. Soap dispenser, single, with foot control
 9. Waste paper receptacle
 10. Clean-up table, 18 by 30 in.



NURSES'GOWN ROOM, NURSES'LOCKER ROOM, NURSES' STATION, OFFICE AND MEDICINE PREPARATION ROOM



EXAMINATION AND TREATMENT ROOM, FLUOROSCOPY ROOM, PHYSICIAN'S OFFICE, PATIENTS' WAITING ROOM AND VISITORS' GOWN ROOM

- 12. Single basin stand
- 13. Pneumothorax apparatus with stand
- 14. Mayo table
- 15. Adjustable stool
- 16. Footstool
- 18. Examination table
- 19. Examination light
- 20. Film illuminator, 2 units of 3 each, built-in
- 21. Lead lined door
- 22. Hook strip

- 23. Laundry hamper
- 24. Clinical scale
- 25. Straight chair 26. Fluoroscope
- 27. Lead lined walls
- 28. Water closet
- 29. Lavatory with gooseneck spout and foot or knee control
- 30. Mobile film illuminator stand
- 31. Film file
- 32. Desk chair

- 33. Executive type desk
- 34. View box
- 35. Bookcase
- 36. Table for clean gowns
- 37. Light-proof shades 38. Dressing cart
- 39. Suction outlet, 5 ft. 6 in. from floor
- 40. Oxygen outlet, 5 ft. 6 in. from floor
- 41. Nurses' call (connected to nurses' station)
- 42. Bulletin board, 26 by 24 in.
- 43. Corridor domelight

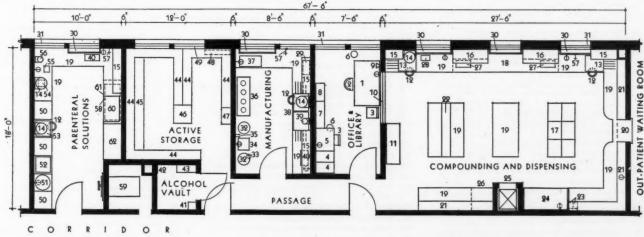
ADJUNCT DIAGNOSTIC AND TREATMENT FACILITIES-PHARMACIES

- 1. Executive desk
- 2. Executive chair
- 3. Straight chair
- 4. 4 drawer file
- 5. Writing table
- 6. Waste paper receptacle
- 7. Book case
- 8. Magazine rack
- 9. Telephone outlet
- 10. Glass panel
- 11. Carboy rack
- 12. Sanitary waste can
- 13. Sink with gooseneck spout and drain-board, graduate rack above, cabinets below
- 14. Glass tank, distilled water, 12 gallon
- 15. Cabinets, adjustable shelves
- 16. Drug cabinet, sectional type, with shelf above counter
- 17. Drug cabinets, sectional type
- 18. Prescription counter, cabinets and drawers below
- 19. Counter, cabinets and drawers below

- 20. Dispensing window
- 21. Adjustable open shelves, starting 18 inches above counter
- 22. Shelf above counter
- 23. Prescription file
- 24. Refrigerator with biological drawers, 32 cubic feet
- 25. Dumbwaiter
- 26. Narcotic safe under counter
- 27. Prescription scale, class A
- 28. Prescription scale, heavy duty
- 29. Counter scale
- 30. Heat outlet grill, inlet grill in base of cabinet
- 31. Guards, at all windows
- 32. Mixing or storing tank, 20 gallons, mounted on stand with casters
- Portable electric mixer
- 34. Filter press, suction-pressure type, mounted on casters
- 35. Hot'and cold water outlets
- 36. Filter rack
- 37. Colloidal mill
- Two compartment sink with drainboard, gooseneck spout, cabinets below
- 39. Still, 2 gallon per hour

- 40. Double element hot plate
- 41. Vent outlet, 8 inches above floor to atmosphere
- 42. Vent inlet, near floor to atmosphe
- 43. Shelves, starting 42 inches above floor 44. Adjustable open shelves, 12 inches wide
- 45. Counter, 24 inches wide, 36 inches high, adjustable open shelf below
- Barrel rack
- 47. Clothes locker
- 48. Radiator, above shelving
- High windows
- 50. Bottle rack
- 51. Bottle cleaner, pressure type
- 52. Sink with gooseneck spout
- 53. Sink with distilled water rinser, omit hot and cold water supply
 54. Drip pan with waste connection in counter
- 55. Suction and pressure pump
- 56. Still, 10 gallon per hour 57. Gas outlet
- 58. Sterilizer carriage, under counter 59. Sterilizer, 24 x 36 x 48 inches

- 60. Hot air oven, 24 x 14 x 14 inches, on counter 61. Counter, open below 62. Storage cabinet, open adjustable shelves

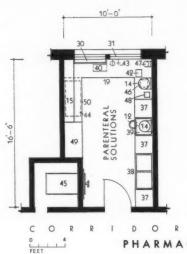


PEET

PHARMACY FOR A 200 BED GENERAL HOSPITAL

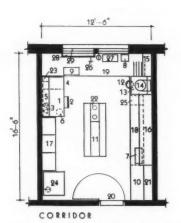
ADJUNCT DIAGNOSTIC AND

PHARMACIES



19'-6' ALCOHOL 1 2 16-6" 24 COMPOUNDING AND DISPENSING

PHARMACY FOR A 100 BED GENERAL HOSPITAL



FEET 4

PHARMACY FOR A 50 BED GENERAL HOSPITAL

PHARMACY FOR A 100 BED GENERAL HOSPITAL

- 2. Chair
- 3. Telephone outlet
- 4. File, 4 drawer
- 5. Book shelves over desk
- 6. Waste paper receptacle
- Still, 2 gallon per hour. Required if parenteral solution room is omitted
 Glass tank, distilled water, 5 gallon
- 9. Portable electric mixer
- 10. Counter, cabinets below, shelves above
- 11. Carboy rack above counter
- 12. Sanitary waste can
- 13. Sink with gooseneck spout and drainboard, graduate rack above, cabinets below
- 14. Glass tank, distilled water, 12 gallon
- 15. Cabinet, adjustable shelves
- 16. Drug cabinet, sectional type, with shelf above counter
- 17. Drug cabinets, sectional type
- 18. Prescription counter, cabinets, sectional type drawers below
- 19. Counter, cabinets and drawers below
- 20. Dispensing window
- 21. Adjustable open shelves, starting 18 inches above counter
- 22. Shelves, starting 42 inches above floor
- 23. Prescription file
- 24. Refrigerator, 16 cubic feet, with biological drawers
- 25. Dumbwaiter

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- 26. Narcotic safe, under counter
- 27. Prescription scale, class A
- 28. Prescription scale, heavy duty
- 29. Counter scale
- 30. Heat outlet grill, inlet grill in base of cabinet
- 31. Guards, at all windows
- 32. Mixing tank, 20 gallons, mounted on stand with casters
- Counter, 24 inches wide, 36 inches high, adjustable open shelves below
 Adjustable open shelves, 12 inches wide
- 35. Counter, 18 inches wide, adjustable shelves
- 36. Filter rack above counter
- 37. Bottle rack
- Two compartment sink, gooseneck spout, cabinets below
- Sink with distilled water rinser, omit hot and cold water supply, cabinets below
- 40. Double element hot plate
- 41. Vent at ceiling and floor
- 42. Metric solution scale
- 43. Gas outlet
- 44. Sterilizer carriage under counter
- 45. Sterilizer, 24 x 36 x 48 inches
- 46. Drip pan with waste connection in counter
- 47. Still, 5 gallon per hour
- 48. Suction and pressure pump
- 49. Storage cabinet, open adjustable shelves
- 50. Counter, open below
- 51. High window

- PHARMACY FOR A 50 BED GENERAL HOSPITAL

- 50 BED GENERAL HOSPITAL

 1. Desk
 2. Chair
 3. Telephone outlet
 4. 2 drawer file
 5. Book shelves
 6. Waste paper receptacle
 7. Prescription scale, class A
 8. Prescription scale, heavy duty
 9. Counter scale
 10. Counter, open adjustable shelves below
 11. Carboy rack, above counter
 12. Sanitary waste can
 13. Sink with gooseneck spout and drainboard, graduate rack above, cabinets below
 14. Glass tank, distilled water, 5 gallon
- Glass tank, distilled water, 5 gallon Cabinet, adjustable shelves
- 16. Drug cabinet, sectional type, with shelf above counter

- above counter

 7. Drug cabinets, sectional type

 18. Prescription counter, cabinets and drawers
 below

 19. Counter, cabinets and drawers below

 20. Dutch door

 21. Open adjustable shelves, starting 18 inches
 above counter

 22. Fliter rack, above counter

 23. Prescription file, on desk

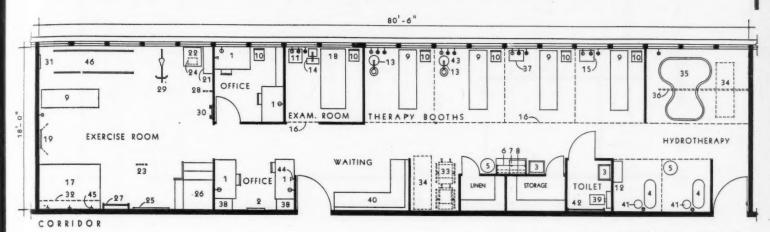
 24. Refrigerator, 8 cubic feet, with biological

- 24. Refrigerator, 8 cubic feet, with biological drawers
- 25. Narcotic safe 26. Gas outlet
- Double element hot plate Heat outlet grill, inlet grill in base of cabinet
- 29. Guards, at both windows

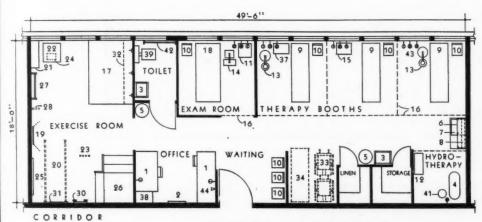
TREATMENT FACILITIES

1D

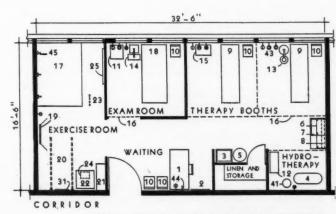
PHYSICAL THERAPY SUITES



SUITE FOR A 200 BED GENERAL HOSPITAL



SUITE FOR A 100 BED GENERAL HOSPITAL

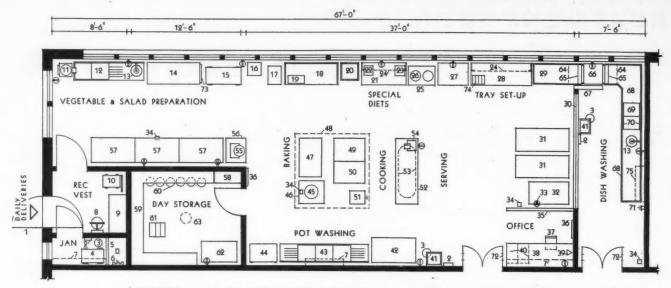


SUITE FOR A 50 BED GENERAL HOSPITAL

PHYSICAL THERAPY SUITES

- 1. Desk
- Bulletin board
- 3. Lavatory with gooseneck spout 4. Whirlpool bath
- 5. Laundry hamper
- 6. Wall cabinet
- 7. Sink with drainboard 8. Glass shelf over sink
- Treatment table with storage space below 10. Chair 11. Bedside table
- 12. Paraffin bath
- 13. Infrared lamp 14. Ultraviolet lamp
- 15. Short wave diathermy unit 16. Rod and curtains
- 17. Gym mat
- 18. Examination table with storage space below
- 19. Posture mirror (triple, portable)
- 20. Parallel bars, folding type
 21. Three shelves, 6, 27, and 48 in. above floor
 22. Table, 24 by 24 in.
- 23. Sayre head sling attached to ceiling
- 25. Shoulder wheel
- 26. Steps 27. Stall bars
- 28. Shoulder abduction ladder arch type
- 29. Stationary bicycle
- 30. Pulley weights
- 31. Wall mirror 32. Shelf 6 ft above floor
- 33. Wheel chair
- 34. Wheel stretcher
- 35. Hubbard tank; a therapeutic pool 8 by 12 ft may replace the Hubbard tank by increasing length of suite 36. Monorall over
- 37. Direct current generators 38. File cabinet
- 39. Water closet 40. Bench
- 41. Adjustable stool
- 42. Hand rall
- Three single outlets on separate branch circuits, 1 outlet 2-pole, 2 outlets 3-pole 44. Telephone outlet
- 45. Gym mat hooks

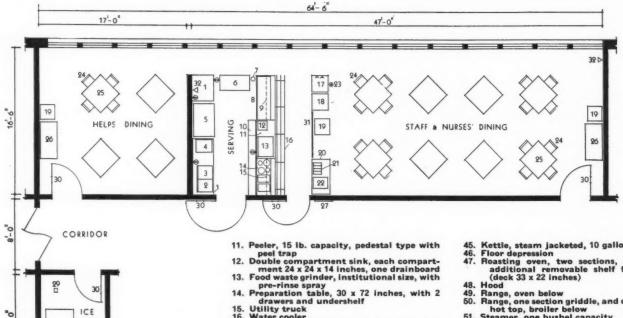
SERVICE DEPARTMENT



CORRIDOR FEET

KITCHEN FOR A 50 BED GENERAL HOSPITAL USING CENTRALIZED BULK FOOD SERVICE

NOTE IF FOOD WASTE GRINDERS ARE NOT USED GARBAGE REFRIGERATOR AND CAN WASHING ROOM SHOULD BE PROVIDED.



10-0 MFG 28 0-0 7-6

CAFETERIA FOR A

100 BED GENERAL HOSPITAL

KITCHEN FOR 50 BED GENERAL HOSPITAL

- Screen door
 Paper towel cabinet
 Waste paper receptacle
 Mop truck
 Curb and receptor or sink
 Mop rack
 Shelf over
 Hanging scale with pan, dial face, 60 lb. x
 1 oz.
 Counter, for checking deliver.
- 1 oz.

 9. Counter, for checking deliveries
 10. Platform scale

- 16. Water cooler
 17. Cooling rack, 24 x 18 x 72 inches, on casters
 18. Baker's table, 30 x 72 inches with 2 drawers
 and overshelf
 19. Baker's scale

- 18. Baker's table, 30 x f2 inches with a diamonary and overshelf

 19. Baker's scale

 20. Single compartment sink, 24 x 24 x 14 inches

 21. Counter, 30 x 60 inches, cabinets below

 22. Dietetic scale, gram

 23. Toaster, electric, 4 slice, heavy duty

 24. Wall cabinets

 25. Coffee urn stand

 26. Coffee urn (battery), one 5 gallon coffee urn, one 10 gallon boiler

 27. Ice cream cabinet, 15 gallon capacity. Provide running water dip well if bulk ice cream is used

 26. Counter, 30 x 84 inches, open shelves below

 29. Clean dish table with up-turned edge

 30. Glass partition above wainscot

 31. Tray truck, open, approximately 25 tray capacity (tray size approximately 14 x 18 inches)

 32. Flood conveyor, 50 patient capacity

- inches)

 32. Food conveyor, 50 patient capacity

 33. Electric outlet

 34. Floor drain

 35. Partition 3 feet high

 36. Bulletin board, 26 x 24 inches

 37. Straight chair

 38. Built-in desk

 39. Telephone outlet

 40. File cabinet, 2 drawer

 41. Lavatory (hand washing)

 42. Refrigerator (salad and cook's), 40 cubic foot capacity

 43. Three compartment sink, each compartment 24 x 24 x 14 inches, one compartment with dial thermometer, two drain-boards
- 44. Pot cabinet, 24 x 36 x 72 inches, adjustable open shelving, on casters

- 45. Kettle, steam jacketed, 10 gallon capacity
 46. Floor depression
 47. Roasting oven, two sections, each with
 additional removable shelf for baking
 (deck 33 x 22 inches)
 48. Hood
 49. Range oven below

- (deck 33 x 22 Inches)

 48. Hood

 49. Range, oven below

 50. Range, one section griddle, and one section hot top, broiler below

 51. Steamer, one bushel capacity

 52. Cook's table, 30 x 90 inches, with plate warmer section below

 53. Pot rack, over cook's table

 54. Meat slicer, motor driven

 55. Mixer, bench type, 20 quart capacity with 12 quart bowl, meat and food chopper attachments

 56. Cabinet stand for mixer

 57. Refrigerator, 40 cubic feet capacity

 58. Locked cabinet

 59. Shelves, 16 inches deep, first shelf 36 inches from floor

 60. Storage can, mounted on casters

 61. Step ladder, pantry type

 62. Frozen food cabinet, vertical type, 18 cubic feet capacity

 63. Ventilator at celling

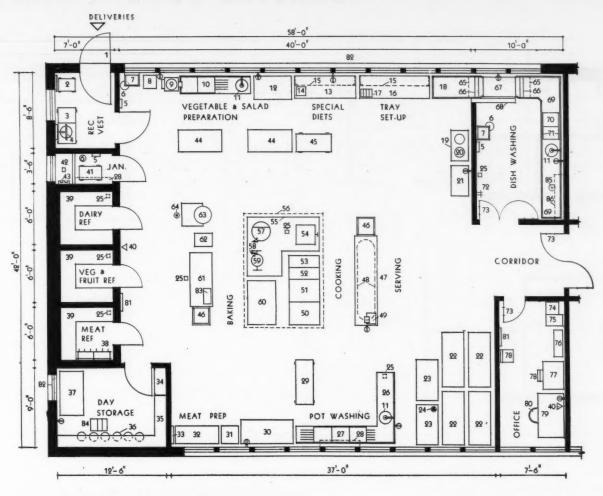
 64. Hood

 65. Dish table drain

- 63. Ventilator at cenning
 64. Hood
 65. Dish table drain
 66. Dishwashing machine, single tank, floor
 model, vertical sliding door, approximate
 capacity 1250 pieces per hour, automatically timed
 67. Rack return
 68. Soiled dish table with 3-inch up-turned
 edge
- Soiled dish table with 3-inch up-twedge
 Double compartment soak sink
 Slide rails (for conveying dish racks)
 Hot and cold water outlet
 Vision panel
 Kitchen tool rack
 Sliver box, 4 compartment
 Shelfover for soiled glasses

CAFETERIA FOR 100 BED GENERAL HOSPITAL

- Back bar, open shelves below
 Hot plate, counter type, 2 element, electric, 3 heat control, heavy duty



KITCHEN FOR A 100 BED GENERAL HOSPITAL USING CENTRALIZED BULK FOOD SERVICE

NOTE IF FOOD WASTE GRINDERS ARE NOT USED GARB REFRIGERATOR AND CAN WASHING ROOM SHOULD BE PROVI

- 3. Griddle, counter type, electric, 3 heat control, heavy duty
 4. Sink, in counter, open shelves below
 5. Refrigerator, 20 cubic feet capacity
 6. Ice cream dabinet, 10 gallon capacity
 7. Ice cream dip well
 8. Cold pan unit
 9. Glass display shelves
 10. Serving shelf
 11. Counter, cabinet below with one shelf, sliding doors
 12. Toaster, electric, 4 slice, heavy duty
 13. Coffee maker, vacuum type, 5 elements
 14. Hot food table with interchangeable panel inserts, and dish warmer below
 15. Shelf and glass protector panel
 16. Tray slide
 17. Water cooler
 18. Glass rack
 19. Folding tray stand
 20. Table, 24 x 48 x 30 inches high
 21. Silver box, 4 compartment
 22. Trays (approximately 14 x 18 inches)
 23. Electric outlet at floor
 24. Dining table, 36 inches square

- 23. Electric outlet at floor
 24. Dining table, 36 inches square
 25. Dining table, 36 inches square
 26. Tray truck, open
 27. Menu board
 28. Ice making machine
 29. Floor drain
 30. Vision panel
 31. Railing
 32. Telephone outlet

KITCHEN FOR 100 BED GENERAL HOSPITAL

- Screen door
 Platform scale, 1000 lb. capacity, drop lever
 Platform truck
 Hanging scale with pan, dial face, 60 lb. x
 1 oz.

- 5. Paper towel cabinet
 6. Waste paper receptacle
 7. Lavatory (hand washing)
 8. Water cooler
 9. Peeler, 30 lb. capacity, pedestal type with peel trap
- ouble compartment sink, each compart-ment 24 x 24 x 14 inches, one drainboard 10. Double

- 11. Food waste grinder, institutional size, with pre-rinse spray
 12. Refrigerator (salad) 30 cubic feet capacity
 13. Countpr, 30 x 84 inches, cabinets below
 14. Dietetic scale, gram
 15. Wall cabinets
 16. Counter, 30 x 96 inches, open shelves below
 17. Silver box, 4 compartments
 18. Clean dish table with up-turned edge
 19. Coffee urn stand
 20. Coffee urn stand
 20. Coffee urn stand
 21. Ice cream cabinet, 10 gallon coffee urn, one 10 gallon boiler
 21. Ice cream cabinet, 10 gallon capacity. Provide running water dip well if bulk ice cream is used
 22. Tray truck, open, approximately 25 tray capacity (tray size approximately 14 x 18 inches)
 23. Food conveyor, 50 patient capacity
 24. Electric outlet, celling drop, 2 receptacles
 25. Floor drain
 26. Table with up-turned edge
 27. Three compartment sink, each compartment 24 x 24 x 14 inches, one compartment 24 x 24 x 14 inches, one compartment with dial thermometer, two drain-boards
 28. Shelf over
- ment with dial thermometer, two drain-boards
 28. Shelf over
 29. Pot cabinet, 24 x 60 x 72 inches, adjustable open shelving, on casters
 30. Refrigerator (cook's) 50 cubic feet capacity
 31. Meat block
 32. Table, 24 x 60 inches
 33. Kitchen tool rack
 34. Locked cabinet
 35. Shelves, 16 inches deep, first shelf 36 inches from floor
 36. Storage can, mounted on casters
 37. Frozen food cabinet, vertical type, 30 cubic feet capacity
 38. Meat hooks and rail
 39. Refrigerator shelving, 18 inches deep, first shelf 36 inches from floor
 40. Telephone outlet
 41. Mop truck
 42. Curb and receptor or sink
 43. Mop rack
 44. Preparetion, table, 20 x 60 inches with

- 42. Curb and receptor or sink
 43. Mop rack
 44. Preparation table, 30 x 60 inches, with
 drawer and undershelf
 45. Utility truck
 46. Single compartment sink, 24 x 24 x 14 inches

- 47. Cook's table, 30 x 120 inches, with 2 drawers and undershelf
 48. Pot rack over cook's table
 49. Meat slicer, motor driven
 50. Range, even below
 51. Range, broiler below
 52. Spreader plate
 53. Deep fat fryer, approx. 25 lb. capacity
 54. Steamer, 2 compartment, 4 bu. capacity
 55. Floor depression
 56. Hood
 57. Kettle, steam jacketed, 30 gallon capacity
 58. Swinging water spout over steam kettle
 (hot and cold water)
 59. Kettle, steam jacketed, trunnion, 10 gallon
 capacity
 60. Rossting oven, two sections, each with
 additional removable shelf for baking
 (deck 42 x 32 inches)
 61. Baker's table, 30 x 72 inches with 2 drawers
 and overshelf
 62. Cooling rack, 24 x 18 x 72 inches, on casters
 63. Mixer, 60 qt capacity, with 30 qt bowl,
 meat and food chopper attachments
 64. Electric outlet at floor
 65. Hood
 60. Dish table drain
 67. Dishwashing machine, single tank, floor
 model, vertical silding door, approximate
 capacity 3000 pieces per hour, automatic
 68. Rack return
 69. Solled dish table with 3-inch up-turned
- capacity 3000 pieces per hour, automatic 68. Rack return 69. Soiled dish table with 3-inch up-turned edge 70. Double compartment soak sink 71. Slide rails (for conveying dish racks) 72. Hot and cold water outlet 73. Vision panel 74. Locker

- 75. File capinet
 76. Bookcase
 77. Table, 30 x 36 inches
 78. Straight chair
 79. Desk
 80. Swivel chair with arms
 81. Bulletin board, 26 x 24 inches
 82. High windows
 83. Baker's scale
 84. Step ladder, pantry type
 85. Glass washing brush
 86. Shelf over for soiled glasses

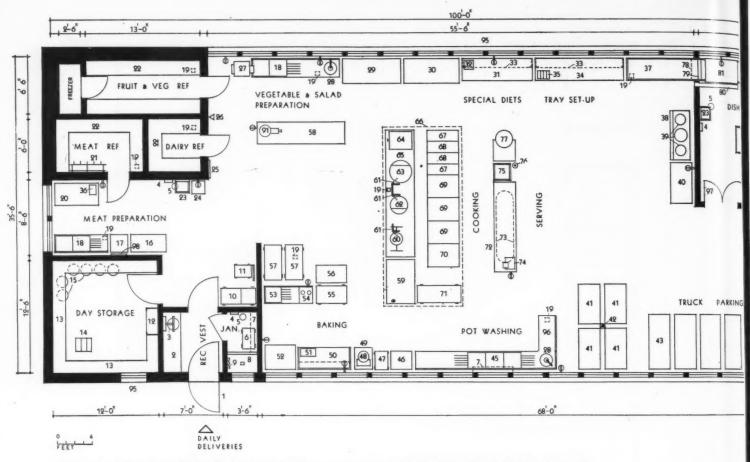
SERVICE DEPARTMENT

15-6

78

WASHIN

82



KITCHEN FOR A 200 BED GENERAL HOSPITAL - USING CENTRALIZED BULK FOOD SERVICE

NOTE IF FOOD WASTE GRINDERS ARE NOT USED GARBAGE REFRIGERATOR AND CAN WASHING ROOM SHOULD BE PROVIDED

KITCHEN FOR 200 BED GENERAL HOSPITAL

- Screen door
- Counter, for checking deliveries
 Hanging scale with pan, dial face, 60 lb. x
 1 ez.
- 4. Paper towel cabinet
- 5. Waste paper receptacle
 6. Mop truck
- 7. Shelfover
- 8. Curb and receptor or sink 9. Mop rack
- 10. Platform truck
- 11. Platform scale, 1000 lb. capacity, drop
- 12. Locked cabinet
- Shelves, 16 inches deep, first shelf 36 inches from floor
- 14. Step ladder, pantry type 15. Storage can, mounted on casters 16. Table, 24 x 48 inches, on casters
- 17. Ment block
- 18. Double compartment sink, each compartment, 24 x 24 x 14 inches, one drainboard 19. Floor drain
- 20. Preparation table, 30 x 60 inches, with drawer and undershelf
- 21. Meat hooks and rail 22. Refrigerator shelving, 18 inches deep, first shelf 36 inches from floor

- 23. Lavatory (handwashing) 24. Water cooler 25. Bulletin board, 26 x 24 inches
- 26. Telephone outlet
- 26. Telephone outlet
 27. Peeler, 30 lb. capacity, pedestal type with peel trap
 28. Food waste grinder, institutional size, with pre-rinse spray
 29. Refrigerator (salad), 60 cubic feet capacity
 30. Refrigerator (cook's), 50 cubic feet capacity

- 31. Counter, 30 x 96 inches, cabinets below 32. Dietetic scale, gram
- 33. Wall cabinets
- 34. Counter, 30 x 120 inches, open shelves be-

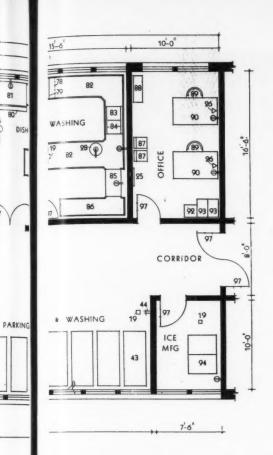
- 35. Silver box, 4 compartment
- 36. Meat chopper, 8 lb. per minute capacity 37. Clean dish table, with up-turned edge 38. Coffee urn stand

- Coffee urn (battery), two 5 gallon coffee urns, one 10 gallon boiler loe cream cabinet, 20 gallon capacity. Provide running water dip well if bulk ice cream is used.

- 1.5 Food conveyor, 50 patient capacity
 42. Electric outlet, ceiling drop, 4 receptacles
 43. Tray truck, open, approximately 25 tray capacity (tray size approximately 14 x 18 inches)
- 44. Hot and cold water outlet
- 45. Three compartment sink, each compartment 24 x 24 x 14 inches, one compartment with dial thermometer, two drain-
- 46. Proof box, 24 x 30 x 72 inches
- 47. Cooling rack, 24 x 18 x 72 inches
 48. Mixer (bench type), 20 quart capacity, with 12 quart bowl
- Cabinet stand for mixer
 Baker's table, 30 x 72 inches, with two drawers and overshelf
- 51. Baker's scale
- 52. Refrigerator, 20 cubic feet capacity
- 53. Single compartment sink, 24 x 24 x 14 inches, one drainboard
- Two element hotplate flush with counter top (for baker)
 Pot cabinet, 24 x 42 x 72 inches, adjustable open shelving, on casters
- Counter, bread storage cabinet below
- 57. Utility truck
- Preparation table, 30 x 120 inches, with drawer and undershelf
- 59. Oven, three sections, two sections baking, one section roasting with additional removable shelf (deck 42 x 32 inches)
 60. Kettle, steam jacketed, trunnion, 10 gallon
- capacity
- 61. Swinging water spout over steam kettles (hot and cold water)
- 62. Kettle, steam jacketed, 30 gallon capacity 63. Kettle steam jacketed, 60 gallon capacity

- 64. Steamer, three compartment, 6 bu. ca-
- pacity 65. Floor depression
- Hood
- Spreader plate
- eep fat fryer, approximately 25 lb. capacity 68. De
- 69. Range, oven below

- 70. Broiler, double deck
 71. Pot cabinet, 24 x 60 x 72 inches, adjustable open shelving, on casters
 72. Cook's table, 30 x 120 inches, with 2 drawers and undershelf
- 73. Pot rack over cook's table 74. Meat slicer, motor driven
- 75. Single compartment sink, 24 x 24 x 14 inches
- Electric outlet at floor
- 77. Mixer, 60 quart capacity, with 30 quart bowl
- Dish table drain
- 80. Rack return
- Dishwashing machine, single tank, approximate capacity 4500 pieces per hour, automatic
- 82. Soiled dish table, with 3-inch up-turned edge
- 83. Double compartment soak sink
- 84. Slide rails (for conveying dish racks)
- 85. Glass washing machine
- 86. Dish table with up-turned edge (for clean glasses)
- 87. Straight chair
- 88. Bookcase
- 89. Swivel chair with arms 90. Desk
- 91. Food cutter, bowl 15 inches diameter 92. Locker
- 93. File cabinet
- 94. Ice making machine
- 95. High windows 96. Table with up-turned edge
- 97. Vision panel
- 98. Kitchen tool rack



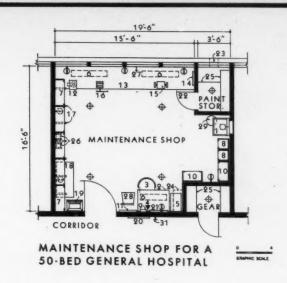
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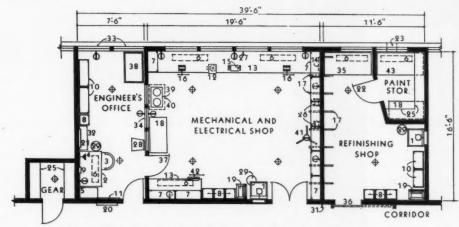
23

MAINTENANCE SHOPS

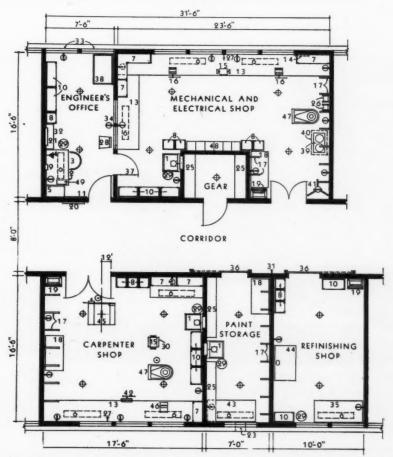
- 1. Service sink with grease trap and medicine cabinet above
 2. Desk
 3. Desk chair
 4. Telephone outlet
 5. Legal size, 4-drawer filing cabinet
 6. Fluorescent light, 7 ft above floor
 7. Wall cabinet
 8. Steel clothes locker, 15 x 15 x 60 inches
 9. Master clock
 10. Steel cabinet with shelving and doors
 11. Bulletin board, 26 x 30 inches
 12. Frame for portable drill press
 13. Work bench, 36 inches high with heavy plank top, slide drawers and cabinets below
 14. Test board with lamp and beli transformer
 15. Electric buffer and grinder
 16. Machinist's bench vise
 17. Wall racks
 18. Four wheel truck especially equipped for each shop
 19. Step ladder, 8 ft high
 20. Fire alarm board
 21. Heating and ventilating control board
 22. Automatic closing, metal covered fire door
 23. Wall vents at floor and ceiling
 24. Book shelf
 25. Steel shelving
 26. Extension cord reel, attached to wall

- 23. Wall vents at floor and ceiling
 24. Book shelf
 25. Steel shelving
 26. Extension cord reel, attached to wali
 27. Compressed air outlet
 28. Straight chair
 29. Waste paper receptacle
 30. Pedestal stand
 31. Watchman's station
 32. Sectional bookcase
 33. Window blinds
 34. Clear glass, beginning 40 inches above floor
 35. Glass cutting table, 30 x 64 x 36 inches high
 with glass rack below
 36. Automatic closing, metal covered sliding
 door with glass view panel
 37. Door with upper panel of clear glass
 38. Plan rack, 26 x 42 x 5? inches high, open
 top and bottom
 39. Portable welding outfit
 40. Portable welding outfit
 40. Portable ventilator hood
 41. Portable pipe vise
 42. Woodworker's vise
 43. Work table, 30 x 64 x 36 inches high
 44. Vapor tight spray hood with exhaust fan
 and hinged panels front and sides
 45. Electric rip saw and jointer combination,
 10" diam.
 46. Key cutter
 47. Drill press
 48. Steel storage bins
 49. Intercommunication, remote station





MAINTENANCE SHOPS FOR A 100-BED GENERAL HOSPITAL



MAINTENANCE SHOPS FOR A 200-BED GENERAL HOSPITAL



Photography, Inc.







MENTAL HOSPITAL PLANNED TO MAINTAIN MORALE

Administration and Receiving Buildings, State Hospital, Hastings,

Minn.

Thorshov & Cerny, Inc., Architects

THE ENLIGHTENED PROGRAM of mental care in Minnesota takes another step forward with this addition to the State Hospital at Hastings. The enlightenment is plainly evident in this building, the feature of which is the several provisions for maintaining patient morale. The architects have done everything possible to obviate an institutional atmosphere, and to provide an array of lounges, visiting rooms, canteens, beauty shops, recreational facilities to cheer patients and to encourage visits of friends and relatives.

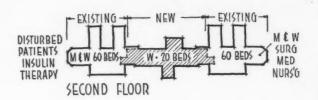
The addition is really two separate buildings, the Administration Building at the lower level and the Receiving Unit placed between wings of existing buildings. The Administration Building contains offices for medical, business and supervisory personnel, with a private entrance and an adequate parking space before it. Thus natural topography was utilized to give a nice separation of administrative and hospital functions, especially desirable to encourage visiting. The large visitors' lounge, the dominating mass in this building, projects out over the main entrance drive to provide a shelter. The large glass wall overlooks a beautiful valley, offering a restful scene to ease many an awkward interview.

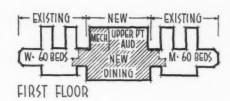
A separate patient receiving entrance (ground floor of Receiving Building) makes it easy to arrange a carefully handled reception, to reduce the gravity of the situation and avoid emotional trauma.

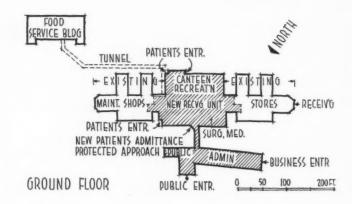
From then on every effort is made to maintain the dignity of the patient and encourage him to share in normal activities. Thus there are beauty shop, barber shop, library, gymnasium, auditorium, canteen area, and other facilities for a continuous program of physical therapy, social dancing, games, movies, church, theater and concerts. Emphasis in the design has been on a gay residential character. Color is liberally used, furniture carefully chosen, for safety as well as esthetics. Detention at windows is maintained by a sturdy stainless steel screen visually similar to insect screening. A soft low night light is contained in the recessed ceiling fixtures.

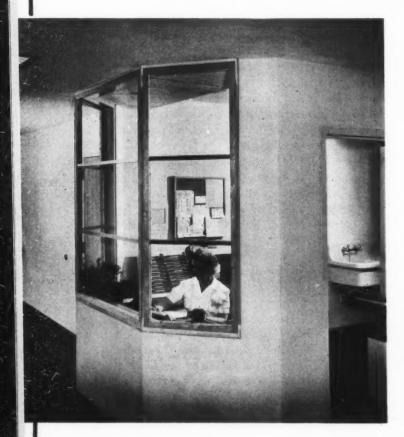
The four-story Receiving Building has a reinforced concrete frame and slab construction, with brick veneer exterior walls. Positive ventilation and humidity and heating control is provided throughout. Heating is by ceiling radiant panels in nursing floors, floor panels elsewhere, radiators being considered a hazard.

NEW MEN: 20, BEDS THIRD FLOOR







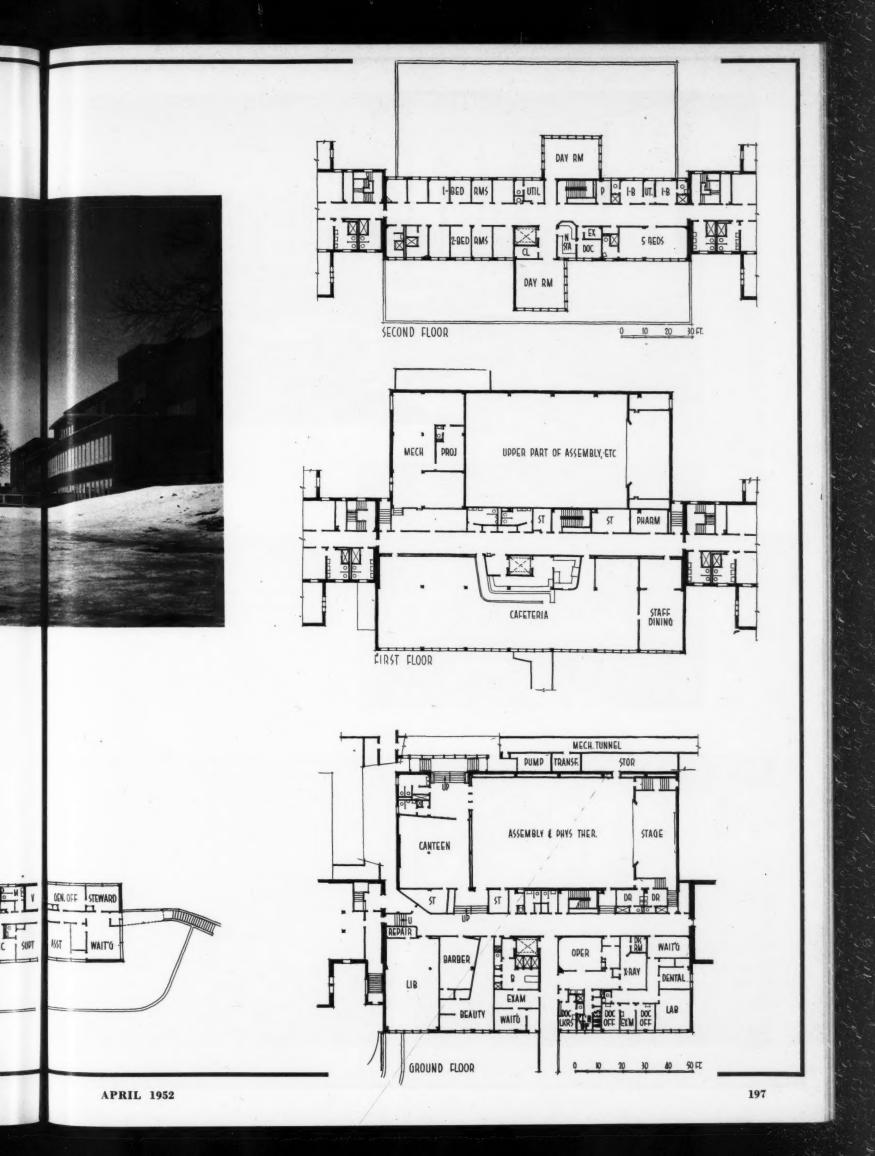


Photography, Inc.



One-story Administration Building occupies lowest level of hilly site, is thus nicely separated from hospital functions. Receiving Building, at higher level, connects with nursing wings in existing buildings, and by covered passage to Administration Building









Some of the morale-building facilities at Minnesota State Hospital — on this page: dining room, beauty shop, dayroom and canteen; opposite page: auditorium-gymnasium, staff dining room and library and patients' library. Such elaborate rooms and equipment, gaily and colorfully done, have high therapeutic value, for morale is the primary objective in every mental hospital



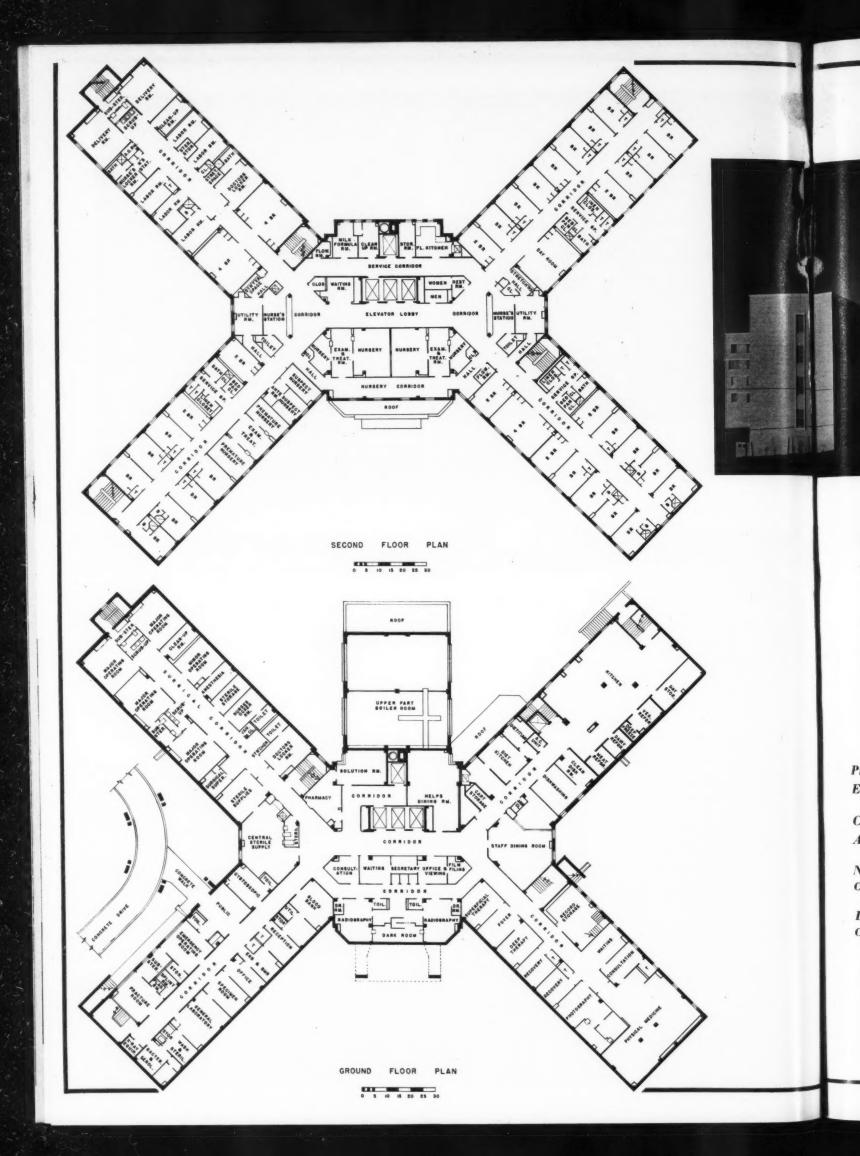
















FIRST UNIT OF NEW MEDICAL CENTER

Paso is slated to be a regional center for 10 counties, with this hospital as the first unit in a teaching center, hence so large a building, with its 272 beds. It is a good example of the cruciform plan, with large central core and radiating wings giving good isolation to nursing units and various medical and surgical departments. Nurses' stations are at central angles, for good super-

vision in all directions; utility rooms are centrally located in nursing wings to save nurses travel. The two plans shown indicate how the cruciform scheme works out; other floors repeat in general the nursing wings shown here. The hospital, with all Class I equipment but not including movable Class II equipment, cost a total of \$2,427,300; this comes out at \$1.19 per cu ft, \$15.10 per sq ft, or \$10,846 per bed.

Providence Memorial Hospital El Paso, Texas

Carroll and Daeuble Architects

Norman B. Roberts
Consultant-Administrator

Landauer, Guerrero and Shafer Consulting Engineers





Providence Memorial Hospital is fully air conditioned for summer and winter. More than half of patients' rooms have access to private toilet and bath facilities; each room is piped for oxygen, has telephone jacks, radio and nurses' call of latest type. Building is a concrete frame, fireproof structure, with adequate fire towers and fire doors in all corridors to permit transfer of patients from wing to wing in case of emergency









F. Wilbur Seider



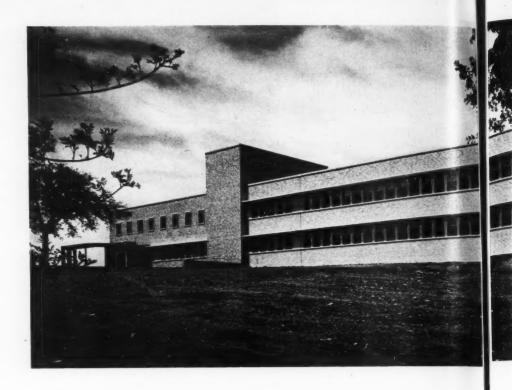


Flow Memorial Hospital Denton, Texas

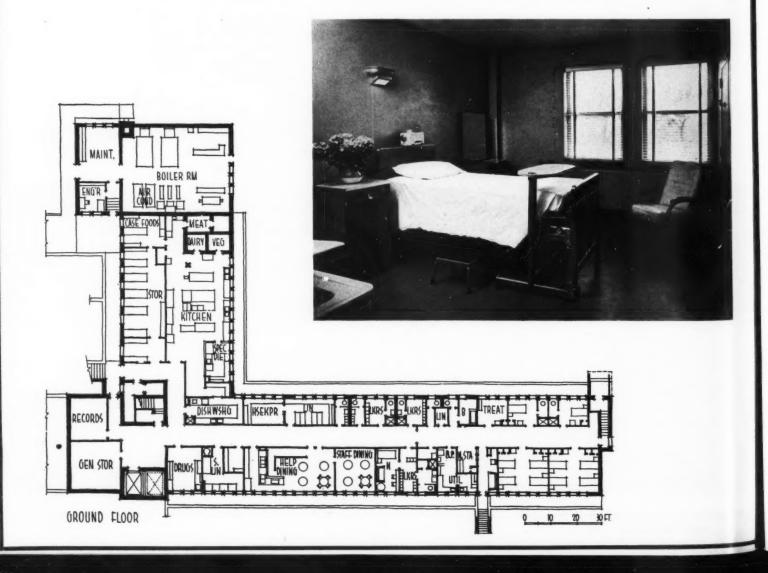
Bennett and Crittenden Architects

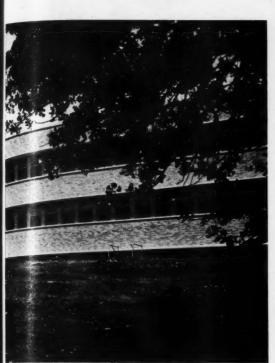
Mullen & Powell Structural Engineers

Landauer, Guerrero & Shafer Mechanical and Electrical Engineers



60-BED HOSPITAL ON 100-BED CHASSIS





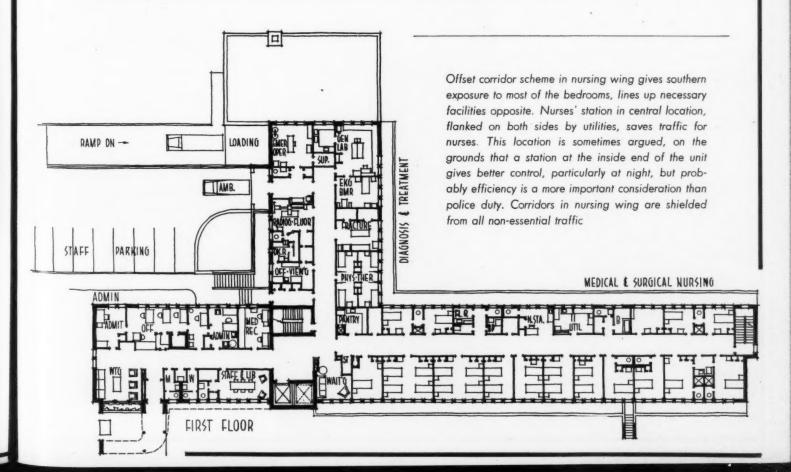


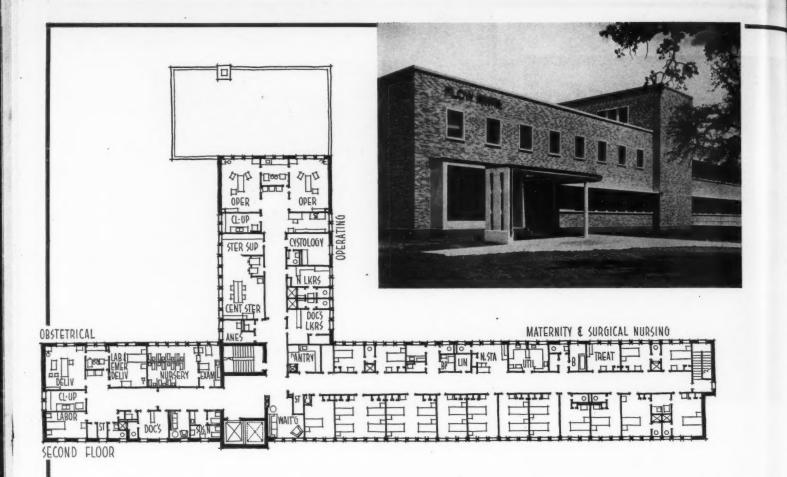


A CCORDING to the survey of needs, this hospital should have 100 beds, but needs and funds did not quite match, so it became a 60-bed hospital on a 100-bed chassis. Actually its facilities will accommodate 120 beds, and it can be enlarged to that size.

It is a hospital well worthy of study. Departmentalization is well worked out, with separate wings giving cul-de-sac locations for office, diagnostic (plus emergency suite), operating, obstetrical departments, and good privacy for nursing units. This last has been the subject of especially favorable comments. Ground floor has a 10-bed nursing unit with its separate entrance.

The hospital won an award of merit at the Texas State Hospital Association convention in 1951. It was constructed and equipped, including its oversize chassis, for a total cost of \$809,725.



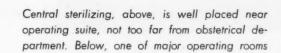


Obstetrical and operating departments each have dead-end locations in separate wings. Both departments, with their supporting facilities, are large enough for double the present bed capacity of the hospital, need not be disturbed when additional nursing units are added to building

Entrance lobby and waiting room get attention in the modern hospital. Planting box inside and planting strip just beyond big windows may ease the tension of visitors

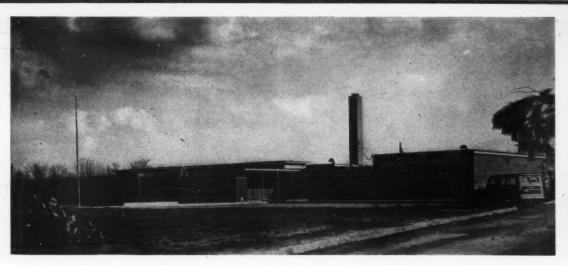














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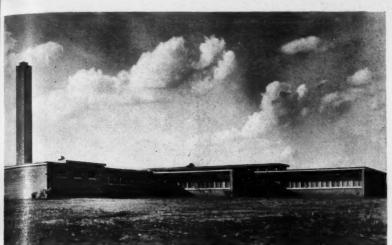
exp



SMALL,

In the very small hospital — this one has but 20 beds — functions begin to flow together, and the various departments cannot be so nicely isolated. This one represents clever manipulation in keeping separations that are necessary (isolation of operation, obstetrical and emergency) and in separating traffic. A double corridor scheme helps in this regard, also serves to keep the building compact and economical. The plan even manages to have separate entrances as in a larger hospital,







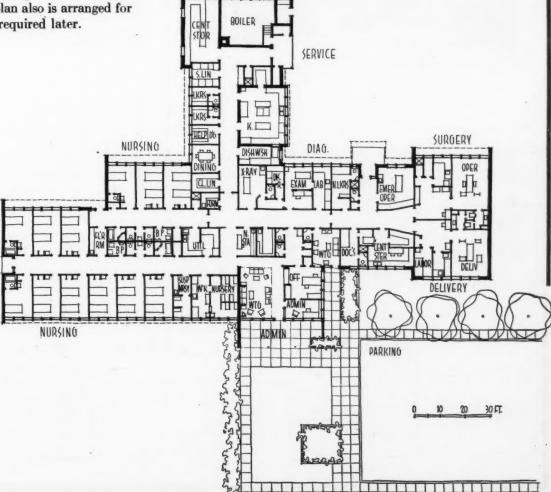
Betty Baldwin

COMPACT ONE-STORY HOSPITAL

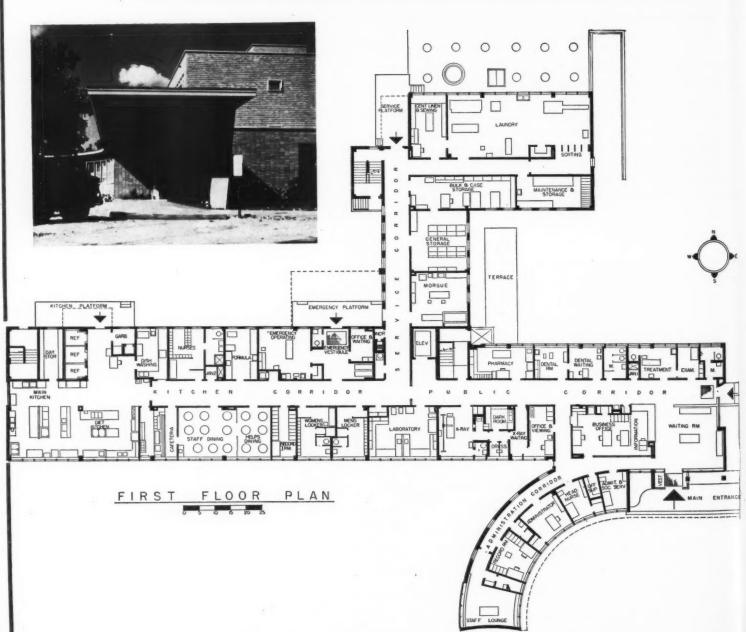
and to keep nursing units separated from service traffic and noise. The scheme also assures good control at all times, and makes it possible to maintain supervision with a minimum number of employees. The nurses' station permits supervision of waiting room and of outpatient facilities too, if that should be necessary. Nursery is close to nurses' station, to save steps for nurses, especially during night shifts. The plan also is arranged for expansion of the nursing unit as required later.

Perry County Hospital, Marion, Ala.

Sherlock, Smith & Adams Architects and Engineers







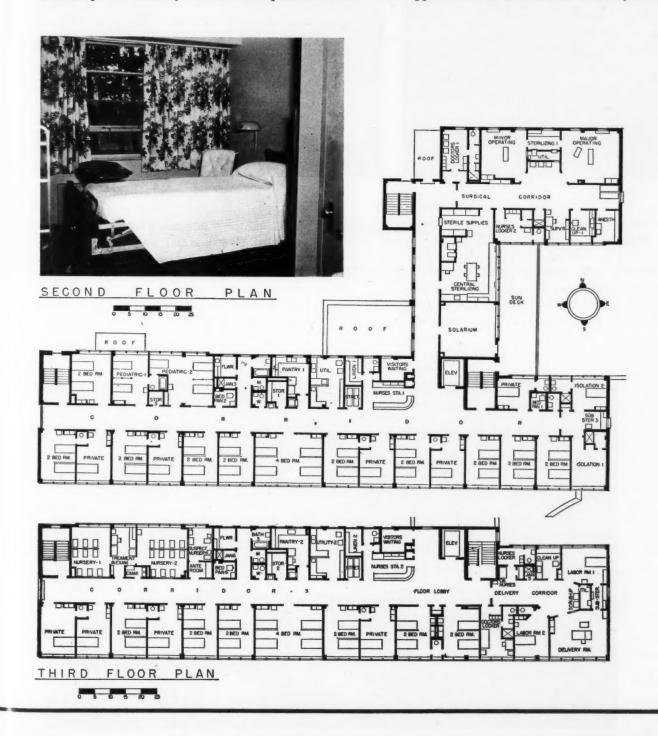
54-BED HOSPITAL FOR RURAL AREA

Wood County Hospital, Bowling Green, Ohio

Strong, Strong and Strong, Architects

A 54-BED HOSPITAL is just about large enough to require full facilities, not quite large enough to allow full departmentalization. Here the separations are maintained quite well; only medical and surgical nursing beds are put together. A small separated wing at the back keeps the laundry and service operations well

away from the rest of the hospital, and gives an isolated location for the surgical suite. Perhaps the most noteworthy feature of the plan is the development of the offset corridor scheme to give the good southern exposure to most of the bedrooms and still utilize to the full the opposite side of the corridor. Actually the corridor





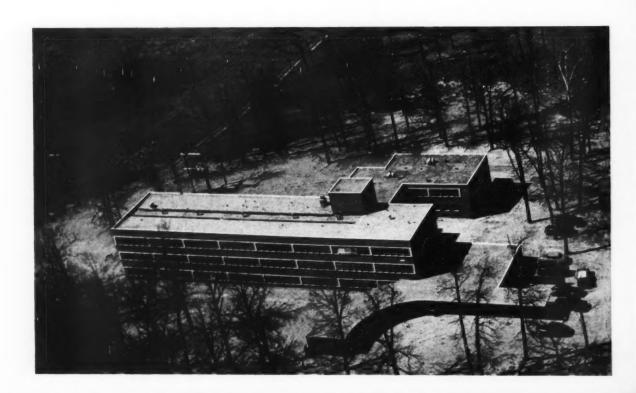






is offset for only a small portion of its length, but the general development of the floor follows the "offset corridor" idea in that only nursery, pediatrics section and a couple of isolation rooms get the northern exposure. The nurses' station with its utilities seems to be an exceptionally workable layout, with the possible exception of the location of the linen room. The nurses' station

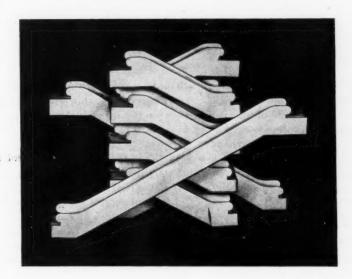
is well placed and the utility space both adequate and centrally located. The hospital serves an essentially rural area which was badly in need of hospital facilities. There was plenty of difficulty in fund raising, in the face of low average income and rising costs, but with Hill-Burton aid the total cost of \$840,000 was finally met. Per bed cost is given at \$15,555.



MOVING STAIRWAYS FOR TALL BUILDINGS

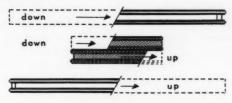
By G. B. Gusrae

Voorhees, Walker, Foley & Smith, Architects

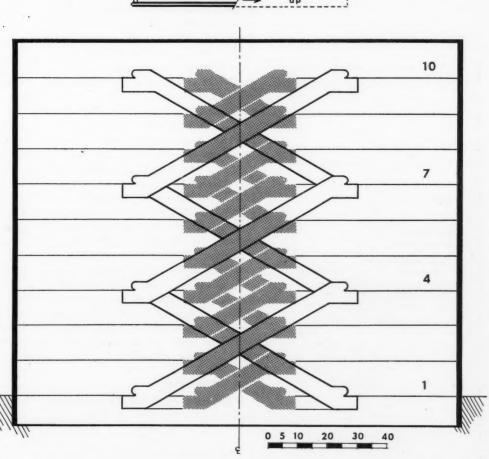


The relative costs and advantages of moving stairways and elevators in office buildings were analyzed by Mr. Gusrae in the December, 1950, issue of ARCHITECTURAL RECORD. He concluded that moving stairways could transport many more people than the number of elevators that could be provided at the same cost. But, because of the slower speed of moving stairways and the walking time required between them at each floor, they were deemed most practical for heights up to 6 stories, with 8 stories being the absolute limit. Elevators would be used to reach any remaining floors.

(Continued on page 214)



Moving stairways traveling a vertical height equal to that of a 5-story building are a familiar sight in New York City subway stations. The author proposes to use three-floor express units in a 10-story office building. There is considerable recoverable cubage under the express units which could be inside offices or storage. The model and drawing have different arrangements of one-floor units just to show what can be done





MOVING STAIRWAYS FOR TALL BUILDINGS

They Cost Less

Still, Mr. Gusrae reasoned, moving stairways are cheaper to install and operate than a comparable elevator installation. Their speed can be increased only slightly, so the big obstacle to their total use in tall buildings is the time consumed in changing from one stairway to another. When he was asked to design a moving stairway system for a proposed 10-story building, he hit upon the idea of using express moving stairways together with local (floor-to-floor) units. In this article, he reviews some of the background information presented in the first article and then discusses the possible solutions for moving stairways in a 10-story building.

Below is a cost comparison of moving stairways and elevators in a 6-story building. The author said in his previous article that this height was about the practical limit for "local" (floor-to-floor) moving stairways. The example, however, is indicative of costs for an express system

EXAMPLE

6-story building Population: 4000

Vertical Transportion
Required Daily Cost
15 elevators (\$30,000 class) \$423.00
10 moving stairways
(5 up, 5 down) 91.50

In today's modern commercial buildings with large populations, we must seriously consider the use of moving stairways in place of elevators — even in buildings up to 20 stories and perhaps higher. Often their application offers the only successful solution to the involved transportation problems, economically and functionally as well.

Advantages of Moving Stairways Reviewed

Five-hundred persons can board a single moving stairway, traveling upward or downward, in any 5 min. interval. A moving stairway "run" (up and down) can successfully serve a building with a population up to 4000 persons. An equivalent elevator installation, capable of transporting 500 persons in any 5 min. interval, would consist of at least thirteen 3000 lb or fifteen 2500 lb elevators. This is based on the average 5 min. carrying capacity of a 3000 lb elevator of 40 persons and that of a 2500 lb elevator of 32 persons. (Usually elevators are designed to make about two round trips in 5 min. Of course this time varies with building heights so as to be within practical limits. In taller buildings, elevators are made to run faster in order to obtain about two trips in 5 min., and cost more. For instance, an elevator traveling at a rate of 200 fpm might cost \$15,000 to \$20,000. If the speed is increased to 350 fpm, the same type of elevator will cost \$25,000 to \$30,000.)

Bearing in mind that an up-down moving stairway "run" (spanning one story at a time) occupies little more than the space of just three elevators (See Fig. 2), that it is always available for immediate use, and that it does not require a machine room, pit, or attendants, its advantages are self-evident.

Cost Comparisons

It has been shown that the daily cost of elevators is considerably higher than

that of moving stairways. The daily cost of a single moving stairway unit running between two floors, including all factors, is about \$9.15.

A 6-story building about 350 ft wide and 250 ft deep may have a population of 4000 persons, based on one person per 100 sq ft of net area. A moving stairway installation for such a building would consist of 5 up and 5 down units or a total of 10 units. In a single-purpose building, it must be assumed that at least 20% of the people will be able to obtain transportation in any 5 min. period at the beginning and end of the day. Both runs of moving stairways then will be operated in the same direction. This doubles the capacity so that 4000 people can be transported up or down in 20 min. The daily cost of the entire moving stairway installation, including capital recovery, liability insurance, electric power and maintenance, would be about \$92.

The daily cost of an equivalent elevator installation based on fifteen \$30,000 elevators manned with elevator attendants, would be \$423. In other words, for the above condition, the daily cost of elevators is nearly $4\frac{1}{2}$ times that of the moving stairways.

In view of the obvious economic advantage, the convenience of immediate availability, the superior functional value, and simpler installation requirements, moving stairways will tend to displace elevators where warranted.

Limitations

Moving stairways are, however, subject to certain limitations and, consequently, cannot be used indiscriminately. They cannot transport disabled persons; nor can they move freight such as office furniture. Most of all, they are limited in speed. The fastest moving stairways in the United States are rated at 125 linear fpm. Some 150 linear fpm moving stairways have been installed in

... and Take Less Space

England. In any event, at 125 linear fpm, the vertical speed is limited to 60 fpm or 1 ft per second.

An average moving stair unit (1 story span) in a building has a vertical rise of about 15 ft. At the rate of one fps, this distance requires 15 sec. to complete. Since an additional 5 to 8 sec. are required for walking between stairway units, the addition of the walking time to the moving stairway time indicates that the equivalent continuous vertical speed obtained with a 125 linear fpm moving stairway is only about 40 fpm.

For that reason, a 6-story building is about the tallest suitable for a standard, floor to floor, moving stairway installation. Taking an extreme case, i.e. a floor height of 15 ft, the overall traveling height of a 6-floor building would be 75 ft, and a passenger would require about 2 min. to complete this trip. It is generally recognized that, although there are 480 min. in an 8-hr working day, 2 to 3 min. appear to be as long as a passenger is willing to wait to reach his destination.

The problem is to find a way of taking advantage of the functional and economic superiority of the moving stairways in applying these to buildings over 6 stories in height.

Solution

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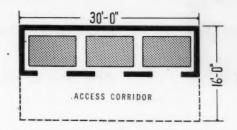
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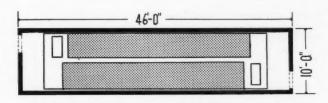
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The great disadvantage in using standard floor to floor moving stairway

These sketches give some idea of the space saved by using moving stairways. For example, a moving stairway system may take only a little more cubage than three elevators (Fig. 2), although it would take many more elevators to transport the same number of people. Fig. 1 shows relative amounts of lobby space required for each. These figures apply only for one run of moving stairways

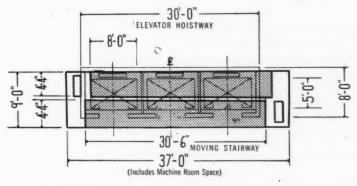


AREA REQUIRED FOR 3-3000 LB ELEVATORS: 480 SQ FT

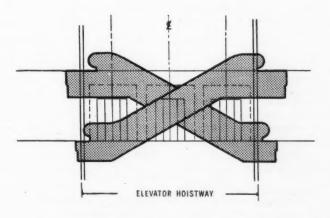


AREA REQUIRED FOR 2 MOVING STAIRWAY UNITS: 460 SQ FT

FIG. 2



PLAN



ELEVATION



MOVING STAIRWAYS FOR TALL BUILDINGS

How They Could Be Used in a 10-Story Building

DESIGN NO. 1

gle floor units)	airway system only (sin	Local st
Travel Time	Number of Changes	Floors
15 sec.	none	1 to 2
38 sec.	1	1 to 3
61 sec.	2	1 to 4
1 min. 24 sec.	3	1 to 5
1 min. 47 sec.	4	1 to 6
2 min. 10 sec.	5	1 to 7
2 min. 33 sec.	6	1 to 8
2 min. 56 sec.	7	1 to 9
3 min. 19 sec.	8	1 to 10

DESIGN NO. 2

Express stairway 1st to 10th floor (9-floor unit) Local stairways floor to floor (single floor units)

This system has very little to offer since it will benefit only those at the 10th floor and, therefore, need not be further considered.

DESIGN NO. 3

Express stairway 1st to 5th floor (4-floor unit) Express stairway 5th to 9th floor (4-floor unit) Local stairways floor to floor (single floor units)

Floors	Use	No. of Changes	Travel Time
1 to 2	Local	none	15 sec.
1 to 3	Local	1	38 sec.
1 to 4	Local	2	61 sec.
1 to 5	Express (1-5)	none	60 sec.
1 to 6	Express (1–5) and local	1	1 min. 23 sec.
1 to 7	Express (1-5) and local	2	1 min. 46 sec.
1 to 8	Express (1-5) and local	3	2 min. 9 sec.
1 to 9	Express (1-5), (5-9)	1	2 min. 8 sec.
1 to 10	Express (1-5), (5-9) & local	2	2 min, 31 sec.

DESIGN NO. 4

Express stairway 1st to 4th floor (3-floor unit) Express stairway 4th to 7th floor (3-floor unit)

Express stairway 7th to 10th floor (3-floor unit)

Floors	Use N	o. of Changes	Travel Time
1 to 2	Local	none	1.5 sec
1 to 3	Local	1	38 sec
1 to 4	Express (1-4)	none	45 sec
1 to 5	Express (1-4) & Local	1	1 min. 8 sec
1 to 6	Express (1-4) & Local	2	1 min. 31 sec
1 to 7	Express (1-4), (4-7)	1	1 min. 38 sec
1 to 8	Express (1-4), (4-7) & Loca	2	2 min. 1 sec
1 to 9	Express (1-4), (4-7) & Loca	3	2 min. 24 ser
1 to 10	Express (1-4), (4-7) & (7-1	0) 2	2 min. 31 sec

DESIGN NO. 5

Express stairway 1st to 3rd (2-floor unit)

Express stairway 3rd to 5th (2-floor unit)

Express stairway 5th to 7th (2-floor unit)

Floors	Use	No. of Changes	Travel Time
1 to 2	Local	none	15 sec.
1 to 3	Express (1-3)	none	30 sec.
1 to 4	Express (1-3) & Local	1	53 sec.
1 to 5	Express (1-3), (3-5)	1	1 min. 8 sec.
1 to 6	Express (1-3), (3-5) & Loc	al 2	1 min. 31 sec.
1 to 7	Express (1-3), (3-5), (5-7)	2	1 min. 46 sec.
1 to 8	Express (1-3), (3-5), (5-7) & Local	3	2 min. 9 sec
1 to 9	Express (1-3), (3-5), (5-7) & (7-9)	3	2 min. 24 sec
1 to 10	Express (1-3), (3-5), (5-7), (7-9) & Local), 4	2 min. 47 sec

units in taller buildings is the necessity, on the part of the passenger, of being subjected to the constantly recurring cycles, each consisting of (1) a brief period of relaxation, (2) the anticipation of required alertness in approaching the landing, (3) the actual alertness in leaving the unit, (4) the competition with other passengers in approaching the next unit, and (5) the final alertness required in boarding the next unit. Any system which cuts down the number of cycles would stimulate a more ready acceptance by the public of moving stairways, even though the time required for the arrival to the destination exceeds that of the speedier elevators by as much as one minute.

The means for obtaining a superior moving stairway system would be to employ "express" moving stairways. This means stairway units traveling more than one floor as contrasted with "local" units traveling from floor to floor.

Moving stairway units traveling a vertical height equal to a 5-story building are commonplace. Many have been and are being installed in various New York City subway stations, and all have been readily accepted by the public. Often the moving stairway of this type is considered superior compared with elevators, primarily due to its immediate availability, less competition in obtaining transportation, and complete absence of uncomfortable jostling and packing in the confined spaces of elevator cabs.

Four 5-story moving stairway express units could easily serve a highly populated 21-story building. Those who have had the experience of traveling on any high rise moving stairway would, most likely, admit that the use of four units for traveling to the 21st floor would be quite acceptable, even though the traveling time would be in the range of $4\frac{1}{2}$ min. The trip to the 11th floor in such a building would require the use of only two units, take about $2\frac{1}{4}$ min., and would certainly be superior to any elevator arrangement.

Design

Two factors that influence the design of a system of express and local moving stairway units, are (1) the travel time and (2) the number of changes from unit to unit.

There is not much that can be done to reduce the travel time. The maximum speed of moving stairways is limited by the average human reaction time required for boarding or for leaving a unit. The speed of 150 linear fpm, used successfully in England, could easily be adapted to express stairways.

A change from one local unit to another takes about 8 sec. Consequently, any express unit by-passing two floors saves about 16 sec., or the average time required for a local unit for floor to floor transportation. In other words, when the local passenger would be getting off at the 3rd floor, an express passenger on a 5-floor express unit would be getting off at the 5th floor.

Any attempt at equalizing time intervals within local and express zones, as is being done with elevators, is not feasible. Further increase in the speed of moving stairways, would be too small to alter the situation much.

Of the two factors influencing design, the number of changes from unit to unit is the one that can be controlled. The underlying principle of the system of express and local moving stairway units is the deletion or reduction of the number of annoying changes normally required by standard floor to floor units.

Example of Express Units

Let us assume a 10-story office or department store building with a 15-ft story height from floor to floor (again extreme, but assumed as the worst possible case). A quick analysis indicates that there are five possible basic designs. (Same size express stairways are used in each design, i.e., all 2-floor, all 3-floor, or all 4-floor units.) Other designs are possible, using different size units in different zones of the building. These will not be considered.

The analysis of designs Nos. 1 to 5 indicates that two designs would provide the most satisfactory results: design No. 3 using 4-floor express units, and design No. 4 using 3-floor express units. In these designs there would be the least number of changes and about $2\frac{1}{2}$ min. of traveling time to the top (10th) floor compared with about $1\frac{1}{2}$ min. required by a modern elevator.

Design No. 4 is, however, more desirable than design No. 3 because it occupies less floor space, requires a smaller hoistway, and uses less supporting steel.

The installation would have three express stairway "runs": 1st to 4th, 4th to 7th, and 7th to 10th floors. In each "run" would be one "up" and one "down," 3-floor express unit. The total express system would consist of six 3-floor units.

The local stairway "runs" would consist of one "up" and one "down" unit for each floor, or a total of 18 single floor units. The entire system would be enclosed in a common hoistway, and the units in each "run" would be arranged in a scissor type grouping. (See Fig. 2). The linear speed of the units would be 125 fpm. This system would be capable of clearing 1000 persons in 5 min. and could easily serve a population of 5000 people distributed evenly through the 9 floors of the 10-floor building.

An equivalent elevator installation, capable of clearing the same number of people in 5 min., would have to consist of at least thirty 2500-lb passenger elevators. (Such an installation would be very impractical, taking entirely too much cubage, in relation to the size of the building, and being expensive to operate and maintain. Actually, if elevators were selected, fewer than 30 would be used, and the flow of traffic would have to be staggered.)

Economics

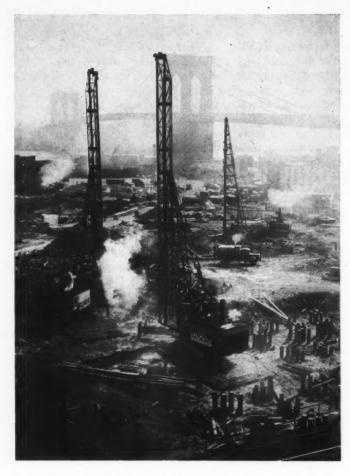
The initial cost of the stairway system as described would probably not exceed \$900,000. The initial cost of the equivalent 30-elevator installation would be about \$1,500,000.

The daily cost of the stairway system, including capital recovery, liability insurance, electric power, and cost of maintenance, would probably be \$325. The daily cost of the equivalent elevator installation, including cost of elevator attendants, would be \$1000, or about three times that of the moving stairway system.

Conclusion

Benefits besides lower daily cost are obtained with moving stairways. They do not require penthouses, pits and complicated controls, and occupy considerably less floor space. Breakdowns effect only one unit at a time with the parallel unit always available as a spare for upward travel. The equipment is simpler and easier to maintain. Its life is equal to and often longer than that of elevators. Initial cost of moving stairways will no doubt continue to decrease in proportion to the increasing demand.

Their use is justified in department stores and office buildings with large populations. The system described, employing express and local moving stairways, will easily provide an acceptable form of vertical transportation for buildings up to 20 stories or even higher.



Many of New York City's buildings stand on solid rock, but now that marginal areas are being developed, piles must be driven in silt to support buildings such as those in the Governor Alfred Smith housing project along the East River

Whether a particular soil is good or bad depends on how it is to be used. For example, a plastic clay makes excellent earthenware; gravel does not. But a clay soil underneath a building may mean that piling is necessary for support, rather than footings which can be placed safely on gravel, and are simpler and cheaper to construct.

Mapping The Soil

The first step in determining the type of foundation required for a building is to have soil borings made. From them two types of information can be learned:
(1) a picture of subsurface conditions (just as a topographic survey describes the surface of the soil), and (2) the physical properties of the various layers of soil found in the soil survey.

Borings ascertain whether there are any layers of soft soil, and if so, if piles are necessary. Borings also disclose whether the soil is suitable for footings. The footings can be designed after a safe load bearing value is determined from tests on boring samples. Depending on

HOW SOILS AFFECT

By S. D. Teetor, Supervising Engineer

Seelye Stevenson Value & Knecht

Consulting Engineers

Simple and inexpensive to use, an auger can determine if there are any layers of soft soil under the proposed foundation of a house. The man in the middle is twisting an auger into the ground. The man at right holds one attached to several lengths of pipe, showing how deep it goes; pipe is added as needed

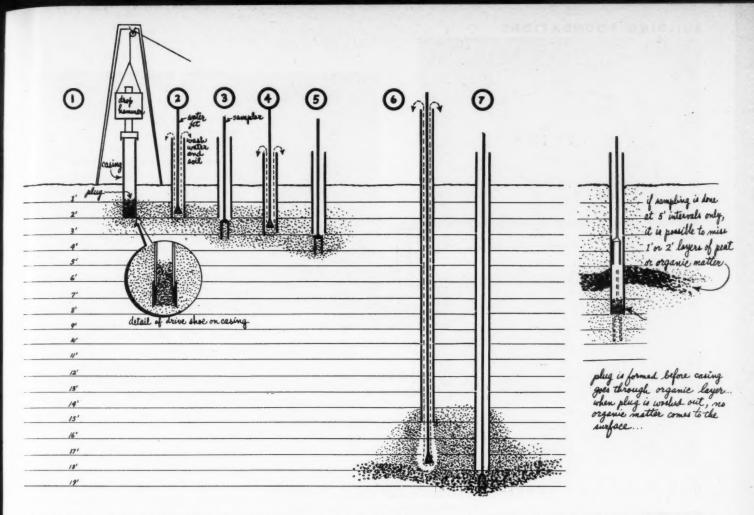
Soil

(A)

prop

miss





Soil sampling followed by testing gives two types of information:

(A) what kind of soil lies under the surface and (B) the physical properties of this soil. Continuous sampling, as diagrammed above, means that one sample is taken each foot for the first 15 ft, then every 5 ft. Sketch at right shows how a treacherous layer of soil might be missed if samples are taken only once every 5 ft, as is sometimes

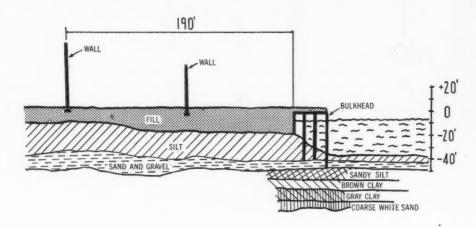
specified. How it's done: (1) 5-ft length of casing is driven down by drop hammer; (2) water jet washes out casing until plug is removed; (3) sample spoon is driven by lighter drop hammer and then withdrawn; (4) jet washes below casing; (5) another sample is taken a foot lower; (6) wash water shows new type of soil, so a sample is taken (7)



Soil investigations for heavy structures call for more complicated equipment than the auger. Casing is being driven into the ground by the "standard boring" method prior to taking a sample. The steps are outlined above



If a power shovel is on the job, test pits may be dug to show soil as it exists. The shovel digs the hole fast enough so that the soil can be examined before the pit collapses



Soil profile drawing for sugar refinery in Philadelphia, plotted on basis of soil borings

HOW SOILS ARE TESTED

Consolidation Test—Simulates the loading that new construction will impose on subsoil. A vertical load is applied to the soil sample, and the amount the sample decreases in height is measured. By applying the results to the actual thickness of the soft subsoil layers, one can estimate the amount that the new construction will settle.

Unconfined Compression Test—This is very easy to make and can be done in the field with partable apparatus. The apparatus measures the amount of vertical load per sq in. that the sample will carry before it fails. One-half of this load is equal to the shearing strength (cohesion) of the soil.

Liquid Limit and Plastic Limit Tests—These tests show the approximate amount of clay in the soil. The higher the clay content, the more settlement to be expected.

Unit Weight and Moisture Content Tests— These are determined by measuring the volume and weight of a sample before any of the moisture has evaporated. The sample is then placed in an oven and dried, then weighed a second time. These tests are necessary to know the wet and dry weight per cu ft of soil in order to make settlement computations. what the first set of borings shows, the investigation may be kept simple, or may become very complex.

If any compressible or suspicious layers are disclosed by the first set of borings, then additional borings must be made, and undisturbed samples taken and tested. Typical tests are: Consolidation, Unconfined Compression, Liquid Limit, Plastic Limit, Unit Weight, and Moisture Content. By use of complex formulas and analyses, the behavior of soil layers may be predicted under the proposed building load, i.e., the amount of settlement, and the factor of safety against a mud wave.

Even for as simple a structure as a house, borings should be made when the



Weight of the column tries to push the footing down into the soil. If over-stressed, the soil will bulge upward alongside the footing, allowing it to sink. This is called a "mud wave"

foundation conditions are unknown. Probably, it will not be necessary to hire any high-priced boring equipment. In certain soils, the needed information (whether there are any soft layers from 10 to 20 ft under the foundation) can be learned by using a post hole auger. With larger buildings, when a crane is available, a few test pits are a good supplement to borings because one can see what the soil looks like — under a proposed footing, for example.

When standard borings are made using wash water, a casing and a dry sample spoon, then it is of the utmost importance that continuous samples be taken for a depth of at least 15 ft below footing level. (See p. 219.) If this is not done, usually the borings only show accurately what is in the soil every 5 ft. In fact, I have been at sites where borings had been made, and later I found soft layers of clay or peat never shown by the borings.

Piles

Now, knowing what should be learned about subsurface conditions, their effect on design of building foundations will be discussed. Starting with a plastic clay, there is no such thing as a cure-all; one professor used to propose, "When in doubt, use piles."

Have you been sold on the idea of using piles for a building and then, after construction has started, found that you had quite a problem? Perhaps a pile is "hung up" above an adjacent pile (cannot be driven any further and sticks up above the other pile) in the same group. There could be several reasons. Perhaps the pile has hit solid rock; it will be a firm pile because of its solid base. The pile may come to rest on the edge of a rock cliff, or on a compact layer of gravel overlaying rock. If, however, the pile hits a boulder that may have a soft, compressible soil under it, the pile will probably settle. This possibility can't be discounted because piles wouldn't have been driven in the first place if the soils had not been found treacherous.

One of the most displeasing experiences in foundation work is to find that a group of piles has ended up bearing on a 45 degree slope. In the trade we say that the piles "walked" before they "fetched" (hit a solid bearing surface). This occurs because a layer of rock underground slopes at this angle.

If borings indicate a layer that will cause hard driving, underlaid by a soft soil, one must be careful about the type of pile used. A thin-wall, closed-end pipe

safe any o two pile; wate high

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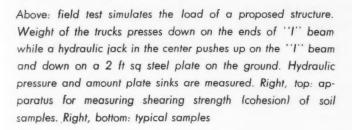
or H

W

Maximum 37' 6"

Typi dril pour C -









may collapse when being driven through the hard layer, so a thick-wall pipe pile or H-pile should be used.

When a pile is difficult to drive, it is safe to jet the pile down if it is not near any existing footings. With this method, two water pipes are put down with the pile; and while the pile is being driven, water is forced out of the pipes under high pressure, loosening the soil. If a footing were nearby, this action would undermine it. Jetting is usually done when a pile must penetrate a dense

layer of gravel overlaying a layer of soft soil. If the piles are stopped above this soft soil, it will consolidate later, causing the building to settle. The piles must be driven through the soft layer to a firm layer underneath.

When short, end-bearing piles (tubular steel piles with plates covering the bottom) are driven through soft silt, nothing is more annoying than seeing some of the piles, already down, "heave" when the last pile in the group is driven. By "heaving" is meant that the piles pop up out of the ground. This happens because the piles displace the soil when driven and cause an upward pressure on both tapered and closed-end pipe piles. (See p. 222.) Careful analysis of borings would have uncovered this condition, indicating that H-piles or open-end pipe piles should have been used.

Even though the pile contractor may not have to be paid extra for redriving the piles, the job takes longer and costs the client more money.

Although there is a multitude of jobs where piles not only are proper, but are mandatory, still there are other types of foundations that can be employed on soft clay.

Various Crass Sections Various Crass Sections Langths up to 150' May be Tapared Steel Point on Rock Langths up to 175' 40' or over no Splice

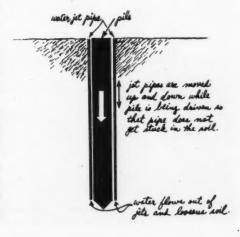
Typical piles: A — metal shell and mandril driven, mandril removed, concrete poured; B — pipe driven, concrete poured; C — precast concrete; D — steel "H" piles

Basement Foundations

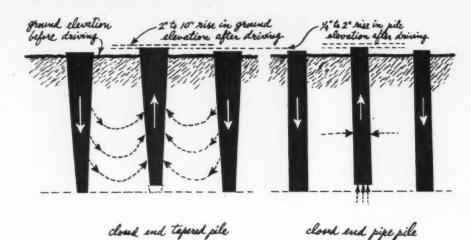
When the building is an isolated structure, the simplest foundation is a

deep basement with the floor slab designed as a foundation mat under the building. Naturally, the depth of the basement and the amount of mat overhang depend on the softness of the clay and the weight of the building. (See p. 222.)

One doesn't need to abandon all hope for an inexpensive foundation if the site for a house or small apartment house is underlaid by organic silt or even peat which is below the water table. First, he must make certain that there is no



Two water pipes are sometimes put down alongside a pile to help loosen the soil and make pile driving a little easier



Pile Heaving. Tapered Piles: after the first pile is down, the additional piles displace more soil. This soil tends to move upward, causing the ground surface to rise. It also pushes up on the sides of the pile, which may lift (heave) the pile an inch or so. Pipe Piles: vibration of pile driving makes the soil temporarily semi-liquid. The piles are hollow until all are driven; then they are filled with concrete. The "soupy" soil tries to float the pile, exactly as a body of water would buoy up a hollow drum. Therefore, the pile may heave about an inch

possibility of the groundwater table being lowered. If it ever is lowered, the organic silt or peat will dry out and disintegrate, causing the structure to settle. Secondly, if the groundwater level is lowered, the buoyant effect of water on the soil (62.4 lb per cu ft) will be lost for whatever depth the water table is lowered. The result would be an increased load on the compressible layers of peat.

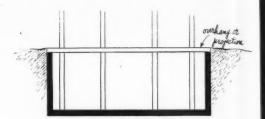
This phenomenon explains why the ground level of a swamp settles when a sewer is constructed through it. The joints in the sewer pipe usually allow leakage of groundwater into the pipe.

This lowers the water level and increases the net weight on the compressible soil because the buoyant effect is lost.

With most house basements, the weight of the soil removed will be more than the weight of the structure — so it won't settle very much. There are houses in Binghamton, New York, in very good condition that are built over beds of peat.

In areas of Norfolk, Virginia, the soil is a very loose alluvial silt, so houses set on footings will surely settle. Therefore, the houses are built with poured reinforced concrete basement walls so that bight columns gode overlang or projection

Reinforced concrete footing mats with overhangs decrease the load per sq ft on the soil. When the soil pressure on the mat must be as low as possible, the basement walls are moved outward (see below)



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the walls act as distributing beams: if the soil sinks under one part of the footing, the concrete wall can transfer the load of the house to another section. By making the basement a strong enough box to keep the settlement fairly uniform, the foundation is safe, economical, and cracks are prevented from occurring in the superstructure.

A Mixture of Theory and Practicality

When I first started to work, I was imbued with the theory of soil mechan(Continued on page 236)

SE	VERY DEN	1	
N=50		-	
		mber of blows standard pen	
_N=30	DENSE		
N=10	MEDIUM		_
	LOOSE		

To give 1 in. settlement if water table is at footing elevation, cut allowable load 50 per cent

Smallest Dimension (x) of Footing, ft

Above: chart for estimating allowable footing loads on sand. Right: table for determining allowable footing loads on clay

PROPOSED	ALLOW	ABLE	BEARIN	G VALU	ES FOR	CLAY	
				1	(\mathbf{C}_2	
Description of Clay	N	с	Square Footing 1.2 x C	Con- tinuous Footing 0.9 x C	Square 1.8 x C	Con- tinuous	
Very soft *	Less	Less	Less	Less	Less	Less	
	than	than	than	than	than	than	
	2	0.25	0.30	0.22	0.45	0.32	
Soft *	2	0.25	0.30	0.22	0.45	0.32	
	to	to	to	to	to	to	
	4	0.50	0.60	0.45	0.90	0.65	
Medium	4	0.50	0.60	0.45	0.90	0.65	
	to	to	to	to	to	to	
	8	1.00	1.20	0.90	1.80	1.30	
Sriff	8	1.00	1.20	0.90	1.80	1.30	
	to	to	to	to	to	to	
	15	2.00	2.40	1.80	3.60	2.60	
Very stiff	15	2.00	2.40	1.80	3.60	2.60	
	to	to	to	to	to	to	
	30	4.00	4.80	3.60	7.20	5.20	
Hård	Over 30	Over 4.00	Over 4.80	Over 3.60	Over 7.20	Over 5.20	

N = number of blows per ft in standard penetration test (140 lb weight, 30 in. drop, 2 in. o.d. sampler)

C = unconfined compressive strength in tons per sq ft

 $C_1=$ proposed normal allowable bearing value in tons per sq ft $C_2=$ proposed maximum tolerable bearing value in tons per sq ft

Table and chart from **Soil Mechanics in Engineering Practice**Karl Terzaghi and Ralph B. Peck, John Wiley and Sons, 1948.

PRODUCTS for Better Building

Precast Insulated Sandwich Walls

A newly developed, insulated sandwich wall panel for commercial, industrial and residential use is reported to help lower costs in masonry construction. Designed by Ford, Bacon and Davis, Architects, the development can be used as a curtain wall to be attached to structural steel, or as a load-bearing wall. Installations to date have been successful enough to encourage the Marietta Concrete Corp., Marietta, Ohio, to build a plant especially for the manufacture of the panels, which consist of a layer of Fibreglas insulation between two layers of concrete. The panels are made in slabs of from 8 by 8 ft to 8 by 30 ft, all 5 in. thick. Edges of the standard panels are tongue-andgroove to provide an interlocking joint.

In the construction of the panels, illustrated at right, concrete is placed in a steel form which has muslin stretched tautly over the bottom form plate. The concrete is vibrated, following which a panel of pre-formed fibreglas insulation is placed on top of it. A second layer of concrete is poured over the insulation and the form is again vibrated. When the concrete has hardened, the slabs are removed from the forms and steam-cured for a minimum of 48 hours, then stored in the open for a minimum of 10 days before being transported to a construction job.

The new sandwich wall is reported by the manufacturer to receive favor among contractors because of the speed with which it can be erected. It is also said to save up to 40 per cent in masonry costs and to be very durable because of its fewer number of joints. The wall is further reported to help cut the expenses of insulating and heating large industrial buildings. It is described as resembling natural Indiana limestone, but may be painted if desired with regular cement paint on the exterior and rubber-base paint on the interior. Owens-Corning Fibreglas Corp., Toledo 1, Ohio.

(Continued on page 252)

In first step of process, facing cloth, reinforcing mesh, inserts and perimeter shear ties are inserted into form



Concrete is poured into form and vibrated for 2 minutes



Next, insulation panel is placed over the first concrete pour and held in position by more reinforcing mesh



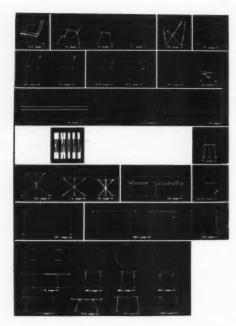
Second concrete layer is poured over insulation, vibrated again, then screeded to a finish and sent for curing





Panels are placed in steam curing room for minimum of 48 hrs., then stored in open for 10 days minimum

LITERATURE FOR THE OFFICE



1952 Knoll catalog has illustrated index; is quick guide to individual sections

Handsome New Catalog Presents Furniture and Textile Designs

Knoll Index of Contemporary Design. Suited to industrial, commercial, institutional, educational (dormitories, etc.) and residential requirements, the line of furniture and textiles illustrated in this attractive book is presented with detailed drawings and many photographs. The book contains a colorkeyed and cross-referenced index and is grouped into five sections -- each flagged with color separators. Included in the furniture group are chairs, sofas; tables; beds, chests, cabinets; desks and office accessories. Dimensions are given for all furniture shown and interior settings are illustrated. The section of the catalog devoted to textiles contains photographs which point out in detail the various patterns and weaves available. A separate brochure of Knoll's new price list may also be obtained with the catalog. 80 pp., illus. Knoll Associates, Inc., 575 Madison Ave., New York 22, N. Y.

Flue Pipe For Venting Domestic Gas Appliances

Johns-Manville Transile Flue Pipe. Folder describes the manufacturer's asbestos-and-cement flue pipe especially designed for venting domestic gasburning appliances. Features are noted and fittings are illustrated with photographs and drawings. Tables of dimensions and weights are given and are keyed to a chart of round and oval pipe and-fittings. 4 pp., illus. Johns-Manville, 22 E. 40th St., New York 16, N. Y.*

Plumbing Fixture Color Kit

Kohler Plumbing Fixture Colors. Kit contains color samples of vitreous china in four colors in which the manufacturer's plumbing fixtures are made. It is designed to help eliminate guesswork in planning wall, floor and ceiling colors where colored plumbing fixtures are employed. Kohler Co., Kohler, Wis.

Split-Level Houses

14 Split-Level Houses Designed for Solid-Fuel Heat. Booklet lists the advantages of a house containing three basic floor elevations, from the standpoint of solid-fuel use, from a livability point of view and from a cost standpoint. Containing floor plans and sketches of 14 different "staggered" level houses, this booklet is attractively layed out and numbers 16 pages. Price: 50 cents. Small Homes Council, Mumford House, University of Illinois, Urbana, Ill.

Lumber

Sugar Pine — The King of Pines. Booklet describes all of the characteristics of sugar pine, including the botanical classification, appearance, structure, weight, etc. The manufacture of this pine is clearly defined — giving information on the seasoning, milling and grading. Building and industrial uses are listed, and photographs illustrate siding, sheathing, subflooring, roof decking, concrete forms, paneling, architectural woodwork, and other installations in actual use. Recommended grades are

shown for construction uses in residences, garages, multiple dwellings and large buildings. 52 pp., illus. Western Pine Assoc., 510 Yeon Building, Portland 4, Ore.

Paneling

Barclay Plasticoated Paneling and Barclay Paneling. Both folders point out varied uses for panels, illustrating with colored photographs, typical installations in a bathroom, kitchen and store, and listing many other examples of its use. All available colors are given both standard and special - and complete information on grades, standard sizes, metal moldings, putty, touch-up and waterproof cement is included. A description of the three surface designs is given and an actual sample of the plasticoated paneling is contained in one of the folders. Short form specifications give instructions for preparation of surfaces on both old and new walls, and application details are shown with drawings. Each folder is 4 pp., illus. Barclay Mfg. Co., Inc., 385 Gerard Ave., New York 51, N. Y.*

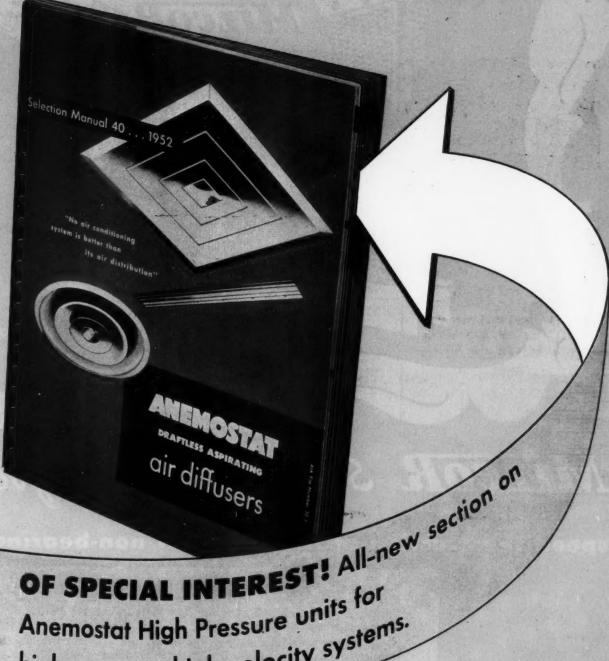
Theatrical Lighting

Stage Lighting Artistry with the Davis Dimmer. Booklet explains how dramatic lighting effects may be obtained in the theater, school, church and auditorium with the use of a lighting control. The basic requirements for flexible stage lighting are given and a typical floor plan shows the proper installation locations of the whole lighting system. The features of the portable and the master dimmers are described and wiring diagrams are included. The booklet contains complete specifications for the various models of the panel, and photographs and technical drawings illustrate how the panels operate and obtain results. Contained in the booklet is a dealers' layout and quotation sheet, giving a description of the component parts and the list prices - for "not wired" and for "wired and assembled." 35 pp., illus. Ariel Davis Mfg. Co., Provo, Utah.

(Continued on page 302)

^{*}Other product information in Sweet's File, 1952.

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METHODS OF FASTENING TO MASONRY WALLS: 1

The following sheets, presented through the courtesy of Structural Clay Products Institute, contain many of the current methods in general use of fastening to masonry walls. Other methods, including more data on the use of powder-driven tools, will be covered in subsequent installments of Time-Saver Standards.

Introduction

When other materials, fixtures, etc., are to be attached to brick or tile walls, the procedure is relatively simple if planned and executed during the construction of the walls. Usually the necessary anchors, nailing blocks, etc., can be properly located and built in by the mason as his work proceeds. The designer or builder has a wide variety of anchoring methods and products from which to select and the final selection will depend largely upon the type of fixtures or material to be attached and the type of masonry to which those fixtures will be affixed.

Attaching Wood Trim

The most common method of anchoring such items as baseboards, chair rails, picture moldings, etc., to masonry walls is by the use of wood nailing blocks placed in vertical mortar joints by the mason as he builds the wall. These blocks should be of seasoned soft wood and creosoted to prevent shrinkage or rot. They should never be placed in the horizontal joints, but only in the vertical mortar joints.

Metal nailing or "wall" plugs provide better construction. Fig. 1 illustrates a typical wall plug. These are made of galvanized metal, either with or without a wood or fiberboard insert. Like the wood nailing blocks,

Fig. 1.
Typical Wall Plug To Attach Wood Trim

Fig. 2. **Methods Of Attaching Fixtures** (a) (b) (c) (d)



METHODS OF FASTENING TO MASONRY WALLS: 2

the metal wall plugs are built into the joints as the masonry is erected. Their exact location is not a serious problem when used to fasten base-boards, chair rails, etc., but it may be difficult to predetermine their location for fixtures, cabinets, shelving, etc.

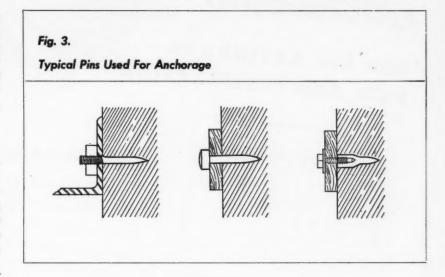
Attaching Fixtures, Cabinets, Etc.

Several methods of attaching fixtures, cabinets, shelving, trim, etc., are shown in Fig. 2. The methods illustrated in Fig. 2(a), (b) and (d) can be used only with structural clay tile walls and are installed after the walls are built and the exact location of the fixture is determined.

Fig. 2(c) illustrates a method of fastening that can be used with either brick or tile construction, by building the wood plug in as the wall is built, or by driving it into a hole drilled into the masonry after it has been erected.

Fig. 2(e) and (f) show two methods which may be used with either brick or tile construction. Usually, the expansion shields or fiber plugs are placed in holes drilled in the mortar joints. As required, such holes may be drilled through the face shells of tile, or into the mortar joints with hard steel or carbide tipped drills. In some cases where softer tile are used, as in plastered partitions, small holes may be made by the use of an ordinary ½-in. punch and hammer.

A relatively new method of attaching to solid masonry walls has been developed which consists essentially of using a power-actuated tool which, in effect, "rams" or drives an anchor or pin into the masonry instantaneously. There are suitable pins for almost any type of anchorage desired. Three typical pins are illustrated in Fig. 3.



Furring Applications

Although there are many examples of brick, structural clay tile and composite brick and tile walls with plaster finish applied directly to the interior masonry surface, furring on 8-in. walls is recommended, particularly in northern areas and for residential construction. In southern areas, an 8-in. vertical cell tile wall is often satisfactory with no interior finish other than paint or with the plaster applied directly to interior surface.

Furring may be of wood, metal, or hollow tile, depending upon the type of construction and the local building requirements.

In Fig. 4 are shown several typical methods of attaching wood furring. The wood furring strips are either 1 x 2" or 2 x 2" and are applied vertically to the wall at intervals usually 16 in. on center. The wood strips may be attached by nailing into wood

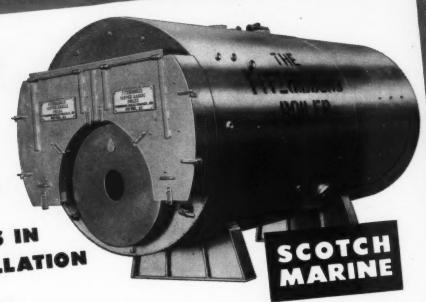
nailing blocks or metal wall plugs as shown in 4(c), or directly into the mortar joints by the use of casehardened "cut" nails or special spiral-threaded masonry nails as shown in 4(d). Special anchor nails fastened to the masonry wall with an adhesive cement is a recent development for installing furring and is illustrated in 4(a). Such fastenings are easily and quickly installed without drilling, plugging or nailing. Bricksize porous clay nailing blocks are available in some areas. Since such blocks are completely inert, there is no danger of nail disintegration from chemical reaction. The use of such blocks is illustrated in 4(b).

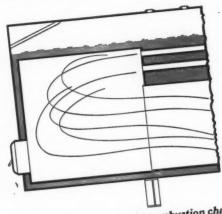
Metal furring strips consist of standard light steel channels fastened by either tie wires built into the mortar joint or by special clips designed for this purpose.

Tile furring may be either attached or free-standing. Hollow or cored



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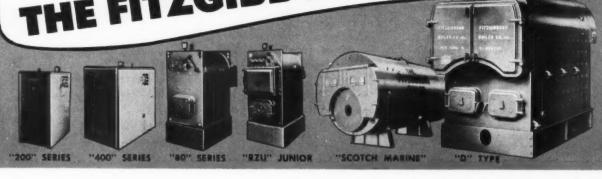
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METHODS OF FASTENING TO MASONRY WALLS: 3

structural clay units when used as attached furring may be 2, 3 or 4 in. in nominal thickness. The 2-in. thickness is available either as a solid back unit or as "split" furring. The split units should always be applied directly to the wall without mortar on the back of the ribs, thus providing an uninterrupted air space. Since the solid back furring tile have one or more air cells through their thicknesses, the space between the units and the wall may be filled with mortar, if desired for greater rigidity or where exterior wall parging is specified. Fig. 5 illustrates typical method of applying split furring tile.

A number of different methods of attaching tile furring to masonry walls may be used. Table 1 gives the proper spacing of anchors or ties for attached furring, together with height and length limitations of the furring itself.

Nailing

Typical 12 x 12-in. face size structural and split furring tile may be attached to walls by driving 10d nails into the mortar joints of the main wall and clinching the heads of the nails down into the cells of the tile or over the ends of the split tile as shown in Fig. 5.

Wire Ties

Heavy wire ties may be built into the mortar joints of the wall as the masonry is erected. These ties should not be less than No. 11 gauge and bent down into the cells of the furring tile as they are erected. If No. 13 gauge wire is used, it should be doubled and looped through the mortar bed to form a secure bond.

Corrugated or Crimped Metal Ties

The most common type of metal

Typical Methods Of Attaching Wood Furring (a) (b) (c) (d)

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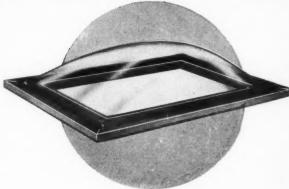
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METHODS OF FASTENING TO MASONRY WALLS: 4

tie used in furring is the galvanized corrugated or crimped type. These ties should be at least $\frac{7}{8}$ in. wide and not lighter than No. 22 gauge.

Wire Mesh

Where wire mesh or hardware cloth ties are specified, they should be at least 4-in. wide strips of ½-in. mesh, No. 20 gauge galvanized wire fabric. These ties should extend at least 3 in. into the masonry wall and to within ½ in. of the face of the furring.

Anchors

Tile furring is attached to concrete by the use of dovetail anchors inserted into metal slots embedded in the concrete. These anchors should be at least $\frac{1}{8}$ in. wide and not lighter than No. 16 gauge. Wire ties not lighter than No. 9 gauge may be used in place of the dovetail anchors. The wire is hooked into the slots or inserts cast in the concrete.

Grout or Adhesives

When using solid-back hollow units, they may often be applied directly to the structural wall without metal anchors or ties by utilizing the high adhesive bond obtained by filling the back space with cement grout. Experiments conducted on reinforced grouted brick masonry indicate that adhesion of cement grout to natural masonry surfaces is very effective.

Recent developments in self-bonding and waterproof adhesives indicate that metal furring anchors or ties may also be omitted for certain types of construction when using this method of attachment. Such adhesives are usually heavy-bodied solvent-type mastics which set without heat or pressure.

Fig. 5.

Typical Methods Of Attaching Furring Tile

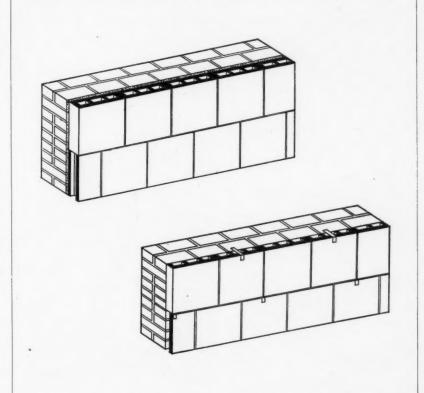


Table 1
Height and Length Limitations For Attached Furring
Tile and Spacing of Metal Ties and Anchors

Type and	Maximum Allowable Spacing of T			
Thickness of Furring	No Ties Required	24" Vertical 24" Herizental	16" Vertical 24" Herizonta	
2-in. Split		Up to 14 ft.	14 to 35 ft.	
2-in. Hollow	9 ft.*	9 to 14 ft.	14 to 35 ft.	
3-in. Hollow	12 ft.	12 to 18 ft	18 to 35 ft.	
4-in. Hollow	15 ft.	15 to 22 ft.	22 to 35 ft.	

What do you in roof insulation?

Economy? Inch for inch of thickness no other type of roof insulation can compare with Insulite's low cost for adequate thermal insulation value! Nothing takes the place of Insulite for quality and price!

Proof of performance? The first fiberboard roof insulation jobs in the world were applied with Insulite. Many of them are now nearly forty years old and appear just as sound as the day they were applied!

But these are only two of the advantages to be gained in specifying Insulite Roof Insulation. Here are some other reasons why we think you'll like Insulite best:



Withstands traffic. See for yourself. Ask your Insulite sales representative for a sample. Then test it. See how strong and rigid it is! That's because Insulite, the original fiberboard roof insulation, is made only from hardy Northern wood fibers!



Handles without breaking. This is one of the big reasons roofers like Insulite Roof Insulation. The strong, rigid sheets are built to withstand the rough handling they are subjected to under actual job conditions! There's no fear of breakage with Insulite on the job!



Cuts cleanly and easily. Next time you're out on a job, see how quickly and easily the roofer cuts Insulite. If you have time, talk to him ... chances are he'll tell you that cutting ease is one of the reasons he likes to work with Insulite Roof Insulation.

Build and insulate with double-duty





ics, and didn't have too much regard for the "practical" foundation engineers. But I have found that it takes a mixture of both theory and practicality to build an economical foundation. The soil table and graph included in this article are quite a step forward from the old "rule of thumb" days. At the same time, they should be used with caution; more as a trial balloon. As an example if the soil is so dense that 20 blows on the sample spoon are required to make it penetrate one foot, then there is no need for the architect to consult a foundation engineer. Conversely, if five, or only three, blows on the sample spoon make it penetrate one foot, it isn't always necessary to discard the site or to use piles. The table and graph indicate that a building should never be built on a five-blow soil. Yet, several buildings have been constructed on spread footings bearing on five and even threeblow soil (non-plastic silt — a very fine sand). Of course, this was done only after a very thorough soil study had been made. In these borderline cases, large sums of money usually can be saved by calling in a foundation engineer.

Can You Build on Fill?

There is still considerable debate about the question of putting up a building on fill. However, a clean, coarse sand which has been flooded deliberately to compact it, and has been in place for several years provides a satisfactory house foundation. Examples can be found at many seaside towns. The houses have been up for years and are still in excellent condition.

But building on top of an ash dump then look out! The odds are against a satisfactory foundation. I have seen several buildings, ranging from a onestory manufacturing plant to a school building, with sections of each built on dumps. Objectionable cracks have opened up, the walls have gone out of plumb, and eventually the building has had to be underpinned.

To be fair, I should say that I also have seen a 25-ft high storage building located on 12 ft of cinder fill, underlaid by 30 ft of organic silt. Even with this condition, the subsoil was so uniform that no cracks occurred when the building settled.

Sand, Gravel, Silt and Rock

It has been mentioned that clays and silts are the least desirable soils, and that sand and gravel are the best. Yet, there are still problems to worry about with them. They are caused by water and lots of it. If the excavation goes below groundwater level, it will be necessary to use pumps and a sump or well points, depending on subsoil conditions.

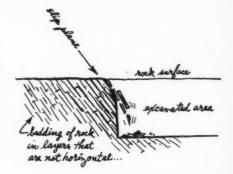
Either a good or bad foundation might be built on non-plastic silt (very fine sand or rock flour) depending on how closely the soil is examined. People on a foundation job sometimes think that piles should be used because the surface of this silt may appear muddy. If laborers are allowed to trample up and down in the footing bottom when the soil is full of water, they start the soil quaking, and it looks like a "mud pie." Trampling on this soil vibrates the top layers and tends to cause them to consolidate. The soil voids are full of water, impeding this process, so the soil temporarily acts like a sponge. This is still a good soil, but some people are ready to call for a pile driver. The secret is to keep the soil well drained and to prevent laborers from making it muddy.

Then there are the difficulties with

rock as a foundation. Whenever a hole is excavated in rock, there must be some provision to drain the hole, or else the basement must be designed to resist the water pressure, and this is expensive. In addition to the possibility of an underground stream flowing in the rock which will not show up until spring, the hole will act as a cistern for any rain or surface water. If no outlet is provided, the water pressure will build up, crack the basement slab and walls, and then water floods the basement.

When rock has been formed in layers, such as shale, precautions must be taken that there are no slip planes in the rock (See below); or, if so, that there are no columns next to excavations. Otherwise, the weight of the column load may push a plane of rock into the excavation, and the column will sink.

When some sections of a building are on rock, and others on soil, several precautions must be taken, depending on what type of soil is adjacent to the rock. If the footings are near rock, but resting on hardpan or a very stiff clay, no precautions are necessary. If they are on



If a column must be set on rock formed in sloping layers such as shale, it should not be near any excavation

sand, then the customary procedure of using one-half the standard soil pressure for the footings adjacent to the rock

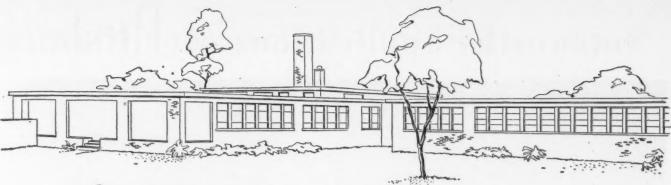
will be satisfactory.

If the soil adjoining rock is a medium clay, then it may be necessary to provide a settlement joint between the footings on rocks and those on soil. Whether this settlement joint is a permanent one (something like an expansion joint between roof sections) or only open during the construction period will depend on whether the soil consolidates quickly or slowly. Settlement joints are quite often very tricky architectural details.

When building on rock, the actual elevations of rock layers should be located by soundings. This reduces the possibility of extra costs for excavations.

Here is a good-sized footing being poured from a transit-mix truck





Architect saves time and money in new hospital construction with

STRAN-STEEL FRAMING



Interior view of Redfield (S.D.) hospital under construction. Stran-Steel framing comes pre-cut, pre-punched, treated with rust-inhibiting paint.



Exterior view of construction. Electrical wiring is installed through factory-punched holes in framing members.

Architects are quick to recognize the many advantages of Stran-Steel *nailable* framing in commercial and industrial construction. Read what Mr. A. McWayne, of Perkins and McWayne, architects and engineers, Sioux Falls, S.D., says:

"We are well pleased with the Stran-Steel construction as incorporated in the hospital at Redfield, South Dakota . . . Stran-Steel offers many possible savings in time and cost of construction."

Mr. McWayne says that Stran-Steel framing permitted complete enclosure of the building to allow interior work to proceed before exterior completion. This means that sub-trades (electrical, plumbing and heating) were not held up waiting for bricklayers, concrete workers, etc., to finish their jobs. Man-hours were saved and costs held down.

If you are planning a school, hospital or industrial building, it will pay you to investigate Stran-Steel framing. Complete literature available on request, or see Sweet's catalog service, architectural ($\frac{3e}{Gr}$) and builders' ($\frac{3e}{Gr}$) files.



Spick-and-span interior of the hospital shows how flush finishing of walls and doors lends convenience, promotes sanitation.

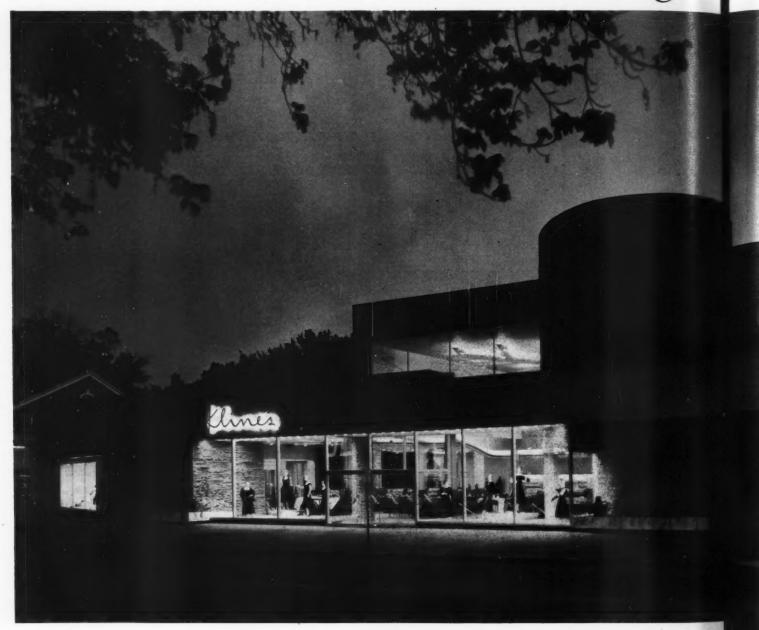
GREAT LAKES STEEL CORPORATION

Stran-Steel Division

CORPO



Noteworthy applications of Pittsburgh



THIS NEW clothing store at Clayton, Missouri, is an interesting example of how the liberal use of Pittsburgh Products can-add immeasurably to the attractiveness and design-appeal of a building. Pittsburgh Polished Plate Glass, Herculite Doors and Pittco De Luxe Store Front Metal highlight the exterior. Pittsburgh Mirrors were effectively utilized in the millinery and various other departments. Designed and executed by Design Incorporated, St. Louis, Mo.

MEMBERS and guests of "The Club" in Shades Valley, Birmingham, Alabama, are treated to this exhilarating view of the city, thanks to the large areas of Twindow. Twindow, Pittsburgh's window with built-in insulation, is a quality unit, the result of more than fifteen years' experience in the manufacture of double-glazed windows by Pittsburgh. Each unit consists of two panes of Polished Plate Glass, with a sealed-in air space between. That means the greatest possible enjoyment of the outdoors, with complete indoor comfort. Architects: Warren, Knight and Davis, Birmingham, Alabama.



Glass in commercial buildings





AT THIS THEATRE in Los Angeles, California, Pittsburgh Products bring more beauty to the exterior, more comfort to the interior. Herculite Doors, as shown here, were chosen for the entrance. Additionally, Pittsburgh Polished Plate Glass was installed on the outside. And inside, Pittsburgh Mirrors, Heavy Plate Glass and Carrara Structural Glass rounded out a practical, well-thought-out-plan of glass utilization. Architects: Arthur Froehlich (Beverly Hills, Calif.) & T. Rogvoy, Detroit, Mich.



SOLEX—''the best glass under the sun''—was selected for glazing all the windows of this handsome building at Salem, Oregon. This heat-absorbing Plate Glass keeps rooms ten to twenty degrees cooler than the outside temperature. It reduces the strong heat and brightness of intense sunlight, while admitting soft, natural daylight into the room. It transmits 70% to 75% of the sun's stotal light, but admits less than 45% of the total solar heat. Solex has proved its exceptional worth—in homes, schools, office buildings, factories, stores, airport control towers, solariums. Architects: Church, Newberry & Roehr, Portland, Oregon.

Design it better with Pittsburgh Glass

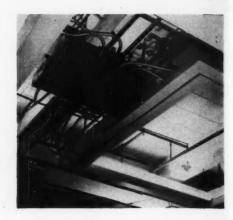


Your Sweet's Catalog File contains detailed information on Pittsburgh Plate Glass Company products.

PAINTS . GLASS . CHEMICALS . BRUSHES . PLASTICS

PITTSBURGH PLATE GLASS COMPANY

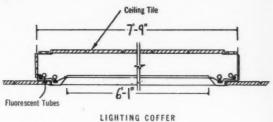




Left: remodeled offices of Sperry & Hutchinson Co. have 7 by 7 ft coffers. Above: unfinished ceiling. Below: detail

COVE LIGHTING, UNUSUAL FOR OFFICES

PROVIDES HIGH QUALITY ILLUMINATION



A SPECIAL SYSTEM OF COVE LIGHTING—unusual for an office—which combines a high quality of illumination with low surface brightness has been developed for the remodeled offices of Sperry & Hutchinson Company in New York City by Guy B. Panero, Engineers.

The offices occupy two floors in which the floor beams drop below the ceilings, so lighting fixtures and air conditioning ducts were designed to fill the spaces between beams, and a hung ceiling of acoustical metal tile was used.

The client asked that the lighting conform to the following conditions: (1) optimum illumination, (2) low surface brightness, (3) no long, narrow lines of light (precluded troffers), (4) no surface mounted or suspended lighting units, and (5) no sacrifice of lighting quality.

One lighting scheme considered was 4 by 4 ft squares in the ceiling, with rows of fluorescent tubes behind a glass screen, thus making use of standard lighting equipment. This, however, would result in a number of high intensity sources of direct light, with long, dark lines in between. Also, it would have been extremely difficult to avoid a high surface brightness; therefore, it was decided to use indirect light.

Since suspended fixtures were not to be used, the only other practical method of indirect light was cove lighting. A standard cove around the perimeter of the room would not provide a high intensity illumination and good quality at the same time. However, it was possible to use a coffered ceiling. These coffers could be illuminated, to almost any level.

The coffers needed to be as large as possible, so that most of the ceiling would be lighted. A 7 by 7 ft square opening in the ceiling tile was finally decided upon since four of these could be placed in a bay, with the air conditioning duct running between them.

A lip was provided around the coffer to make room for the fluorescent tubes and, also, to shield the tubes from view.

In order to throw more light to the center and away from the backwall, a vertical backwall and asymmetrical reflectors were used.

After one week of operation, the maximum light was 44 footcandles. The illumination close to walls dropped to a minimum of 32 footcandles due to the high absorbency, and low reflectivity, of the wall finishes used.

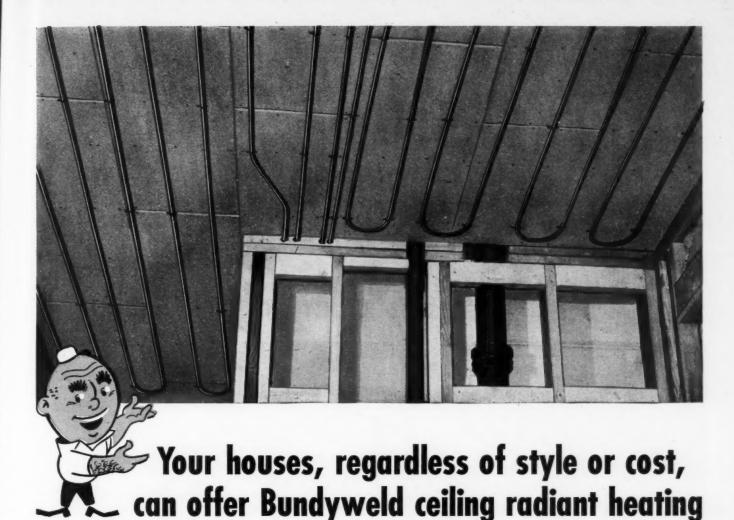
Wood Arches Span 180 Feet in Private Hangar



NINE, THREE-HINGED, laminated wood arches, believed the largest to have gone up during the current steel shortage, have been used in a \$250,000 private hangar for the Continental Can Co.

The hangar is 180 ft long, 160 ft wide and 25 ft high. Constructed almost entirely without strategic materials, the hangar features an asbestos shingle exterior and doors covered by hardboard. Designers and builders are the Wigton-Abbott Corp. of Plainfield, N. J.

(Technical News continued on page 244)



One of the most exciting, sales-producing features you can put into your houses. Today's finest heating — and tomorrow's; low in cost, easy to install.

Sales points for your houses

With Bundyweld ceiling radiant heating, your houses feature the most even, clean, economical, and convenient heating of all. It cuts housekeeping chores by hours; cuts fuel bills to pieces; postpones wall washing, redecorating, and cleaning of furnishings for years.

Here's heating that truly radiates — evenly, swiftly downward from the invisible ceiling system. Here's

heating that feels natural, fresh, invigorating—as thousands of home owners will tell you.

Easy, low-cost installation

With Bundyweld Tubing, a ceiling radiant heating system is a cinch to install at low cost. Standard 24' lengths of lightweight, ductile Bundyweld (one end expanded when specified) are easily handled; quickly bent, joined, and mounted onto the ceiling; then easily plastered over. Low-cost Bundyweld saves you time and money on the job, gives finest radiant heating performance, too. Send coupon below for tull details.

Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

© 8.T.C.

WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of copper-coated steel.



ously rolled twice around laterally into a tube of uniform



Copper coating fuses with steel. Result ... Bundyweld



steel tubing, double-walled, and brazed through 360° Send for your copy of handsome 20-page brochure that gives you meaty facts on Bundyweld ceiling radiant heating. (Bundy also offers this brochure to future home buyers via full-page, 4-color ads in Better Homes and Gardens and American Home.)

Radio	y Jub ant Hi	exting	Company g Division, pigan	Dept.	AR	452
				consu	mar	hro

Yes! Rush me 20-page consumer brochure giving inside story- of Bundyweld ceiling radiant heating ... I would also like a copy of Bundy trade brochure ...

Position____

Company.

Zone State



Blo-Fore

ELECTRIC EXHAUST VENTILATORS

Pry-Lite

RECESSED LIGHTING FIXTURES





• Regardless of architecture, color motifs or styling, there is a Pry-Lite for every room in the home. New, attractive finishes of chrome, copper, brass and painted hammertone gray blend with any furnishings or interior decoration. Beautifully patterned glass gives clear, full illumination without glare or dark spots. Snap-on fronts make Pry-Lites easier to clean or relamp there are no screws, no hinges, no nuts, and no tools needed.

And, more important, Pry-Lites (1000 series) cut costs because they have...(1) A pre-wired, built-in pull box; (2) adjustable mounting straps that eliminate framing-in time; (3) a plaster flange which fits any finish; (4) and they are U. L. approved for any standard building wire.

 A Blo-Fan electric exhaust ventilator makes the kitchen complete and modern. Its patented blade combines the volume of a breeze fan with the power of a blower. Its attractive grille is removable without tools and the motor assembly merely lifts out for easy cleaning. Pry-Lite modern recessed lighting fixtures complete the picture.



9-SPEED SWITCH

se

This exclusive Blo-Fan feature makes it as easy to control the rate of ventilation as it is to control the speed of a car. Standard equipment on De Luxe Model 210 Ric-Fan only.

Beo-Fase America's Most Imitated Home Ventilator

Progration The Original Recessed Lights with Snap-on Fronts

*TRADE MARK REG.

Make Buyers Out of Shoppers With

Survey after survey has shown that there is a market for approximately 1,000,000 houses a year for the next several years ... BUT, all building trades are faced with keener competition than ever before.

Because ... People who buy, build or remodel are more discerning-they are demanding VALUE and QUALITY when they invest, even before price. That is when the reputation of Blo-Fan electric exhaust ventilators and Pry-Lite recessed lighting fixtures is an important factor for architects, builders, and electricians to consider. The reputation of Blo-Fan and Pry-Lite names is built on value and quality. Skilled craftsmanship plus quality material from reputable sources have been important in building the Blo-Fan and Pry-Lite names and what they stand for-just as your name and reputation are made and recognized through the products you use and the way you use them.



Remember the old adage, "Quality is remembered long after price is forgotten." Remember, too, that when you specify or install Blo-Fan electric exhaust venti-lators and Pry-Lite recessed lighting fixtures...

their reputation will guard yours"

PRYNE AND COMPANY

BOX R-42, POMONA, CALIFORNIA

EASTERN FACTORY: 124 Adams Street, Newark, New Jersey Warehouses: Los Angeles, San Francisco, Chicago, Atlanta Stocked by more than 700 wholesalers in over 350 cities.

"The hottest news in heater history!"



In new or old construction. On remodel jobs, merely cut a hole between studs . . . There's no plastering to do... The attractive heater front covers the rough plaster edges... "Rough-in" box mounts flush with flanges against the wall, has two knockouts in bottom, and no extra pull box is required . . Heater assembly is secured to "rough-in" box with four machine screws, thus eliminating the need for drilling extra holes in finished walls.

MORE HEAT WITH LESS CURRENT

Real economy is provided by the Glomaster auxiliary heater... Uses no more electricity than an iron... Radiates heat from floor to head with absolute safety...There are no flames to ignite clothing or towels...Modern wire grille remains at safe temperature—will not burn the skin if touched . . . Heating element is non-metallic-will not transmit shock... Choice of chrome or baked white enamel finishes . . . U. L. APPROVED!

AMAZING HEAT ELEMENT NEVER BURNS OUT!

Sintered carbide compound heating element is not affected by splashed water and will not corrode.

If local stocks are not available, ask your Blo-Fan or Pry-Lite distributor to order Glomaster for you.

PRYNE AND COMPANY

Pomona, California

Newark, New Jersey



RADIANT HEATING PIPES IN DETROIT BUS GARAGES

PROTECTED FROM CORROSION AFTER EARLY TROUBLE

Most radiant heating systems in service for a number of years have performed satisfactorily, but in a few cases they have been designed and installed in such a way that trouble is inevitable. First of all, the slab must be designed properly, waterproofed, and underlaid with a recommended fill.

There are times when still further precautions must be taken—electrolytic protection, for example. A case in point was the problem at three terminal garages built for the Detroit Department of Street Railways four years ago, each building covering 250,000 sq ft and with a capacity of between 450 to 500 buses.

To melt the accumulation of snow and ice the buses pick up — as much as one ton each during one "trick" — and to provide comfortable working conditions,

radiant heating systems were installed in each garage, with pipe coils laid on sand fill. The radiant heating systems operated satisfactorily until the second heating season, when deterioration from corrosion of the pipe coils became so severe that the system in one garage had to be abandoned, and leaks were developing at an alarming rate in the other two.

What happened, according to engineers who were called in to determine whether cathodic protection would save the remaining two heating systems, was that the pipes were eaten away by a salt solution. Salt came from two sources. The snow-ice mixture picked up by buses from the streets is saturated with salt used to melt snow. This drops off the buses and leaks through the slab joints

Radiant heating pipes in garage floors corroded because of contact with salt. Below: rectifier used with cathodic protection systems which will halt further corrosion



and other cracks in the floor, and eventually seeps through to the sand fill. Also, the soil, itself, around Detroit is notorious for its saline content.

Cathodic protection was found practicable, costing approximately \$15,000 for each garage, in contrast to \$80,000 each to replace the radiant heating by space heaters. Cathodic protection in effect reverses the flow of electrical current that originally caused the pipes to oxidize, so no further corrosion occurs. Under the floor of each of the two garages were installed 68 graphite anodes, buried 8 ft down. The series of anodes (called ground beds) are electrified by 12-volt rectifiers (for direct current). The protection systems were designed and installed by the Hinchman Corp. of Detroit.

Southwest Research Institute Suggests New Floor Slab Design

RESULTS OF 18 MONTHS STUDY of structural concrete floor slabs for houses by Southwest Research Institute indicate that deep foundations under the perimeter probably are not needed. Conducted by the Housing Research Foundation of the Institute, the studies show that perimeter foundations or grade beams contribute little strength or stiff-

ness to floor slabs laid on grade.

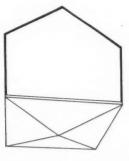
To cope with the problem of soil movement, attempts have been made in recent years to design "floating" slabs which offer no resistance to the soil's horizontal movement, but which can be reinforced economically against unevenly distributed vertical movement. One type, accepted by FHA in San

Antonio, consists of perimeter grade beams and intermediate beams spaced on 12 to 16 ft centers. Most of the load is transmitted to the ground through these beams, but the slabs have not been entirely satisfactory for supporting heavy masonry walls.

Many models of slab designs were built and tested, and it was found that a slab of inverted pyramid design yielded the greatest strength and stiffness for the same estimated cost as the FHA design. The steel was placed diagonally in the slabs instead of parallel with the sides to increase strength and stiffness.

It is somewhat difficult to place steel in the inverted pyramid, but almost as good is a 105%-in. slab, with the same amount of steel placed 12 in. on centers diagonally top and bottom. The flat slab is easier to place and waterproof.

(Technical News confinued on page 248)





ANNOUNGING! New Improved

THESE FEATURES ASSURE YOU THE MOST MODERN PUMP AVAILABLE

7. Bronze fitted throughout.

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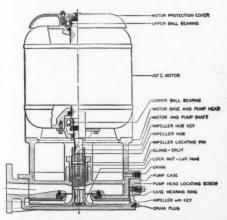
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- 2. Enclosed, precision balanced bronze impeller.
- 3. Stainless steel impeller hub.
- 4. Renewable bronze wearing ring.
- 5. Split bronze packing gland.
- 6. Drain plug for impeller casing.
- 7. Standard ball bearing motor, 40°C continuous duty, with ample overload capacity.
- 8. Heavy cast iron receiver.
- 9. Heavy duty float control, seamiess copper float and brass rod.
- 10. Impeller has top suction inlet eliminates air or vapor binding.
- 77. No piping between pump and receiver.
- 12. Float switch adjustable to various water levels.
- 13. Rigid motor support, very quiet.
- 14. Threaded outlet on pump cover. to provide drainage and eliminate base with drip lip.





Hoffman, an old name on pumps, is proud to present a completely NEW line of Close-Coupled Condensation Pumps in single and duplex units!



Not only are these compact Hoffman Pumps recognized as highly efficient units, but they have design features which amazingly prolong service life, at low upkeep cost. They are so constructed that all parts subject to wear can be easily renewed. All cast iron and bronze construction.

Series "CS" and "CD" Pump capacities range from 1,000 to 150,000 sq. ft. EDR. Discharge pressures range from 10 lbs. per sq. in. to 60 lbs. per sq. in. All together, these pumps are a rare combination of sound design and excellent workmanship. Units are shipped ready for connecting to the system.

FOR SMALL SYSTEMS THE "WATCHMAN NO. WC 8-20" PUMP for low pressure heating systems. Rating: 500 to 8000 s Pump Capacity: 12 gallons per s



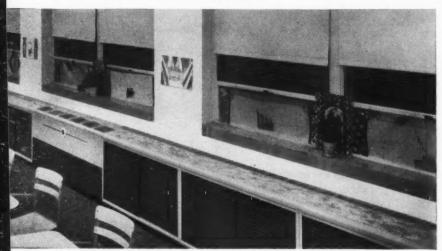
HOFFMAN SPECIALTY CO., Dopt. AR-4 1001, York St., I rrupt, Vectors and Condensation Pemps, Forced Hot Wa Sold by leading wholesalers of Heating and Plumbing Sevience

Miss Jones could give you a



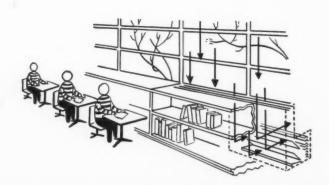
Blackstone School; Mendota, Illinois, has healthier—more alert students because of DRAFT|STOP heating and ventilation. Superintendent of Schools, M. E. Steele; Architect, Scribbins & Winsauer; Consulting Engineer, Beling Engineering Consultants.

Woodmont School Addition; Nashville, Tennessee, ventilated, heated and cooled by DRAFT|STOP equipment. The modern answer to the heating and ventilating problems of the schoolroom. Superintendent of Schools, J. E. Moss; Architect, Tisdale & Tisdale.



HOW DRAFT STOPS DRAFTS

In the exclusive DRAFT|STOP system, window downdraft is completely controlled at all times. Provision for constantly trapping cold air downdraft at the windows is offered only in the Herman Nelson DRAFT|STOP system.



• Miss Jones is a sixth grade teacher—and a good one. She knows how important good health is to her pupils. She knows, too, that proper classroom heating and ventilating is a key to pupil health.

Miss Jones could tell you that her classroom is neither stuffy nor drafty because it is equipped with DRAFT|STOP—the heating-ventilating system that provides the perfect indoor climate for work and study.

Automatic DRAFT|STOP provides an entirely different and superior solution to the heating-ventilating needs of the modern schoolroom. Drafts are overcome by intercepting the cold air from window areas, before it spills into the room. The captured cold air is either drawn into the unit and heated, or expelled from the building.

DRAFT|STOP introduces outside air only as needed to satisfy *true* ventilation requirements of the room. Outside air is tempered before it is circulated; a portion of the room air is recirculated because there is no purpose in heating a constant flow of outdoor air.

DRAFT|STOP also provides cooling action when needed by drawing in enough outside air to reduce temperatures to proper levels.

By providing the proper heating, cooling and ventilating without drafts, Herman Nelson DRAFT|STOP creates the perfect indoor climate for work and study. It should be part of your plans for a new school building or a modernization program. For further information Write Dept. AR-4, Herman Nelson Division, American Air Filter Company, Inc., Moline, Illinois.

Hillsboro Elementary School; Hillsboro, New Hampshire, has the right climate for study and health the year 'round, thanks to DRAFT|STOP equipment. Superintendent of Schools, J. Harold Moody; Architect & Consulting Engineer, Perley F. Gilbert Associates.



Is radia probles tests ha normal

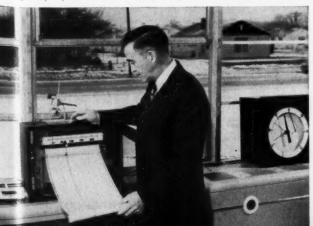


Is radiant heat loss to cold classroom windows a significant problem? Rarely, if ever. Herman Nelson school laboratory tests have shown that Skyshine-radiant heat from the skynormally balances any excessive body heat loss in this direction.

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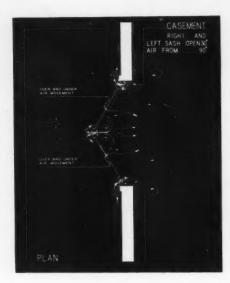
Write today for your free copy of the new Herman Nelson DRAFT STOP Catalog and schoolroom heating-ventilating guide.



DRAFT STOP HERMAN NELSON

SYSTEM OF CLASSROOM HEATING AND VENTILATING







TEXAS A & M REPORTS ON AIR FLOW THROUGH CONVENTIONAL WINDOWS

Air flow patterns through a variety of conventional windows is the subject of a recent report by the Texas Engineering Experiment Station of Texas A & M (Research Report No. 33). Its purpose is to promote improved window designs as well as better selections of windows for particular applications. The researchers noted that in many cases the stress on window design is for draft-free ventilation in winter without much thought to summer cooling.

Three classes of windows were studied: simple openings (double-hung, horizontal

sliding); vertical vane openings (casement); horizontal vane openings (projected, awning, jalousies).

Tests with manufacturers' windows were first conducted in a full-scale experimental building mounted on wheels (so that orientations could be varied). Then model windows were set in a model building and tested with a wind tunnel, the reason being that experiments could be controlled better. Acid smoke from titanium chloride blown through the windows by the tunnel's fan was used to show the air patterns, from which

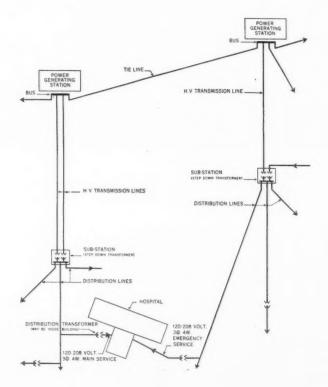
drawings, such as the three above, were made, covering 24 separate tests; the closer the dots, the faster the air flow.

Some conclusions were: Simple Openings. Window does not change vertical direction, nor alter speed much. Vertical Vanes. Folding windows spread air wide into the interior (perhaps fewer windows can be used than with other types). Vertical pivot windows have extreme air directing characteristics. Horizontal Vanes. Jalousies direct air up and down, allowing installation at different heights with little change in ventilation.

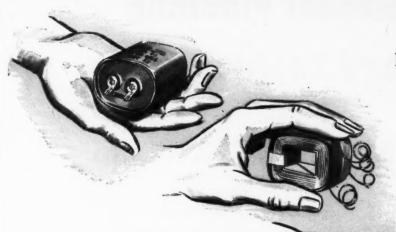
Engineer Discusses Hospital Electrical Requirements

Principal requirements for electrical distribution systems in hospitals is the subject of a recent article in *The Construction Specifier*, by Noyce L. Griffin of the Division of Hospital Facilities. The article covers power demands, major equipment, wiring in hazardous locations, and emphasizes emergency power systems.

Engineer Griffin says that, as a minimum, the emergency system should be on the site, and should serve at least the operating and delivery rooms, nurseries, stairs and partial lighting for corridors. He lists three acceptable systems, but believes that combinations may be desirable; these are: connection with separate generating plant, internal combustion engine, and storage battery. Generators starting cold require some time for warming up, so it is advisable to add a light duty storage battery system.



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Each component in every
Advance Ballast is tested
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NEW DATA ...

on Hospital Electrical Planning for Architects and Engineers

Are you planning a hospital? This new data book for Hospital Architects and Engineers outlines the steps in designing the electrical distribution system and reviews the electrical requirements with plan views and riser diagrams for a number of representative hospitals.

Using a 100-bed general hospital design as typical, a room-by-room electrical analysis is made, load calculations by rooms and by panelboards are shown, and feeder and conduit sizes are listed. Kva demand calculations and transformer application calculations are summarized for this example.

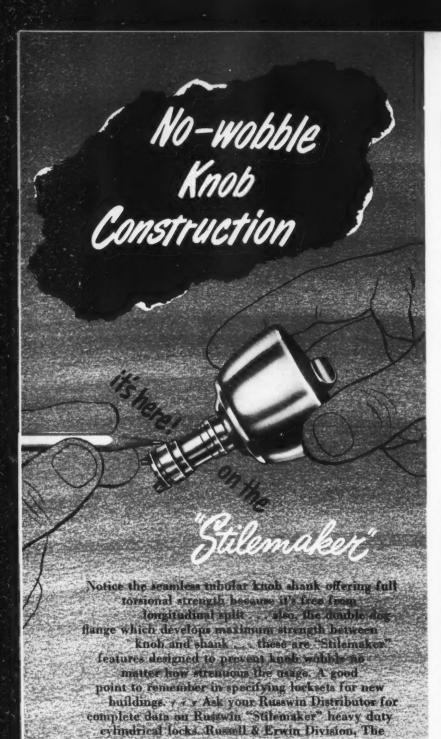
The vital X-ray Department is fully covered by recommendations on X-ray planning and descriptions of the equipment for various hospital sizes. Another section is devoted to signal systems.

If you have not yet received your copy of this helpful data book, please contact your Westinghouse representative.

J-94892

EQUIPMENT FOR THE CONSTRUCTION INDUSTRY







American Hardware Corporation, New Britain, Conn.

Architectural Engineering

PRODUCTS (Continued from page 223)

Spot Welding Invisible Joints With Plywood Paneling

A portable high-frequency electric gluing unit which spot-welds plywood wall panels in place in a few minutes has recently been perfected. The unit is said to permit the use of 1/4-in. plywood paneling to achieve a result which compares favorably with that previously possible only with more expensive 3/4-in. panels. The new method eliminates exposed surface nails completely and permits glued panels to set almost instantly, where before it took several hours for them to do so. The completed installation is said to have perfectly flush joints and yet cost appreciably less.



Electronic gluing unit permits quick, invisible plywood joints

In the conventional method of erecting plywood paneling, nails or brads are used to hold the panels in place while the glue sets. With the high-frequency electric gluing unit, the spot welds take the place of nails and hold the panels while the rest of the glue sets naturally. The welds are applied wherever a nail or brad would customarily be used. In an alternate method using the new unit, plywood sheathing can be nailed to studs, and ¼-in. hardwood plywood spot welded to the sheathing instead of directly to the studs. Conventional plastic resin glues are used in the process

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which is essentially the same as that which has been used for sometime in the furniture industry. The use of portable units for the welding is, however, comparatively new. The electrical units are reported to be safe and simple to use. They require only normal 110 v current, and in some cases may be rented from suppliers or manufacturers. United States Plywood Corp., 55 W. 44th St., New York 36, N. Y.

Built-In Wall Cabinets

Of natural select birch, the Wall Hung Bar Cabinet combines utility and simplicity. It is fitted with adjustable



Decorative wall cabinet bar is compact—yet spacious

shelves for glasses and other bar accessories and is compact enough for any room, yet adequately spacious. Equipped with suspension slots that facilitate hanging, it is adaptable to all contemporary decor. All drop-front doors have recessed brass pulls. Closed, the dimensions are 30 in. wide, $7\frac{1}{2}$ in. deep and 151/2 in. high. The same style cabinet also comes equipped as a Telephone Cabinet with shelves for telephone and directory, including wire dividers for phone listings, messages, etc., or as a Desk Cabinet, which contains black lacquered partitions for filing letters and providing stationery space. The desk cabinet also has a built-in cork bulletin board above the partitions for tacking notes. Space is provided for ink, pencils and other necessities. Sizes vary slightly for the three different cabinets. Contemporary Trends, 42 Sheridan Avenue, Mt. Vernon, N. Y.

(Continued on page 255)



NOW...a new, more beautiful, more durable, more sanitary treatment for walls and ceilings

Bickford's, Inc. Meat Cutting Room, Long Island City, New York. Architects: Brown & Gunther, Con. Engineer: Douglas L. McIntyre

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ALUMISEAL WITH **ALUMISATIN** FINISM

U.S. Pat. App. For Reg. U.S. Trade Mark

To the unsurpassed insulating features of heavy gauge ALUMISEAL may now be added the satin-like quality of ALUMISATIN finish, providing an unequalled treatment for walls and ceilings where the highest degree of beauty, cleanliness and durability are desired with positive control of humidity, moisture-vapor and temperature.

We recommend applications in rooms, corridors, etc., in such projects as: Hospitals Restaurants Schools Dairies Research & Ment Experimental Storages Laboratories Super Markets Grocery Warehouses Commissaries

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ALUMISATIN finish is achieved by applying to heavy gauge Alumiseal sheets a heavy adherent coating of aluminum oxide integral with the surface of the metal.

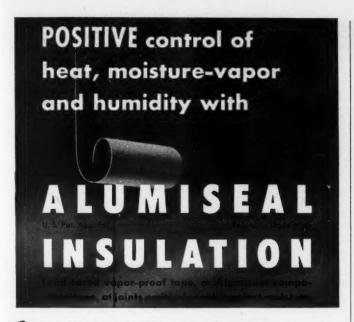
ALUMISATIN finish is intrinsically hard, and its smooth, impervious surface offers substantial resistance to wear and the collecting of dirt. It can be readily cleaned with mild soap and water.

ALUMISATIN finish offers the added advantage of economy in maintenance, for the permanence of its beauty eliminates the need of periodic painting or refinishing. For further information, write:

It is recommended that the installation of Alumiseal with ALUMISATIN finish be handled by our own applicators, or by one of our accredited distributors.

ALUMISEAL CORPORATION

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Alumiseal is unique double duty insulation. A combination of solid aluminum alloy sheets that reflect and defy heat with joints sealed tight as a drum by lead-faced vapor-proof tape, or Alumiseal composition tape, that defies moisture. Nothing else equals Alumiseal. Its clean, sanitary finish is rust proof, rot proof, vermin proof, fire safe. No deterioration, no costly replacement, no maintenance, no painting.

Alumiseal is ideal for freezers, coolers, bakery proof rooms, fermentation rooms, hardening rooms banana ripening rooms, bulk storages—used extensively in all-weather test rooms and altitude chambers where temperatures range from minus 100°F. to plus 200°F.—any refrigerated or controlled humidity structures.

C. T. HOGAN & CO., INC. specializes in the engineering and installation of ALUMISEAL and ALUMISEAL with ALUMISATIN finish.

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General Motors Research Lab.
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Tell us <u>your</u> insulation problem. We'll be glad to tell you how ALUMISEAL can solve it, easily and economically. No obligation.

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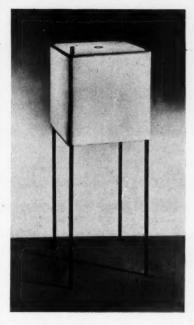
Over a Decade of Experience in Reflective Insulation

Architectural Engineering

PRODUCTS (Continued from page 253)

Lighting Fixtures

A complete new collection of floor and table lamps has recently been introduced by Lightolier. Incorporating the designs of well known architects, designers and artists, the group includes lamps suited to contemporary decor. The Young Moderns collection consists of wrought iron combined with Philippine grass cloth, translucent white parchment or aspenslat shades. Also in



Noguchi table lamp gives an effect of airy lightness

the collection is a polished brass and Korinawood tripod shaft table lamp with a Philippine grass cloth shade. The Noguchi Collection features both round and square "hat-box" shades of a special translucent white oiled paper, which shows a watermark texture when lighted. The pencil-slim metal legs are available in Ebony, Red and Bone White. The Noguchi floor lamps contain a frosted glass shelf midway between the shade and the tips of the legs. Another line shown in the collection is the Bristol Glass group. Available in the latest color trends, the lamps are adaptable to contemporary or traditional backgrounds. Lightolier, Inc., 11 E. 36th St., New York, N. Y.

(Continued on page 258)



Translucent Glass Jalousies* Divide An Office Without Disjointing Its Organization

Something is happening in modern office design! Venetian window partitions or jalousies employing translucent glass by Mississippi are fast replacing solid separations that cut off light, ventilation and communication from adjoining areas. These interior jalousies help integrate the entire organization and permit more accurate control of temperatures for heating and air conditioning.

The new adjustable dividers give each office better control of illumination and air movement. Opened or closed, the translucent glass floods interiors with softened "borrowed light" that creates a friendly feeling of spaciousness and comfort.

Opened windows permit the executive an unrestricted view of his entire force. Yet, he can have complete privacy when desired with an easy turn of the crank. And the closed vanes reduce office clatter to a minimum.

In venetian window office partitions for new buildings or in the modernization of existing structures, specify translucent, light diffusing figured glass by Mississippi. Available in a wide variety of patterns and surface finishes wherever quality glass is sold.

Send today for free booklet, "Figured Glass By Mississippi." Contains many ideas for commercial applications of this versatile, modern material.





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*Mississippi Glass Co. does not construct or install jalousies. For estimates and other information, see your local supplier.

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WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND



Dispensary in The American Brake Shoe Company, Rochester, New York

FREE ... New Booklet! Shows How To RAISE Morale and LOWER Maintenance

Here are the answers to clients' questions on how to put rest areas to work building workers' morale—how to slash wall and floor maintenance—how to reduce janitor service and still retain high cleanliness standards.

American-Olean's new booklet gives you the facts you need. Shows page after page of industrial installations in full color photographs... Provides accurate color plates for making selections... Has time-saving, ready-to-use specifications for wall and floor tile.

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Executive Offices, 930 Kenilworth Ave., Lansdale, Per

There's never been anything like this complete, concise booklet in convenient file size. It's packed with facts... filled with wholely usable information. It's yours without obligation. Send for your copy today.

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PRODUCTS

(Continued from page 255)

Occasional Furniture

Included in the selection of new pieces shown at the recently redecorated Reilly-Wolff showroom is a black steel *Catch-all*. This attractive and versatile table can be used in its natural form for magazines, fruits, flowers or other decorative accessories, or it may be

fitted with a corktex top (available in black, red, yellow or greige tweed) and used as a chair-side table. It is readily adaptable for use as a hassock by inserting a thick foam-rubber cushion into the rim. May be obtained with a rectangular top as well as a round one.

Among other items displayed are the Stackers, useful either as stools or small cocktail tables. These have black steel legs and corktex tops and may be stowed away — one atop the other — when not in use. Reilly-Wolff Assoc., Inc., 50 E. 34th St., New York 16, N. Y.



Convertible table may be used in three different ways

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Saving Steel by Using Steel

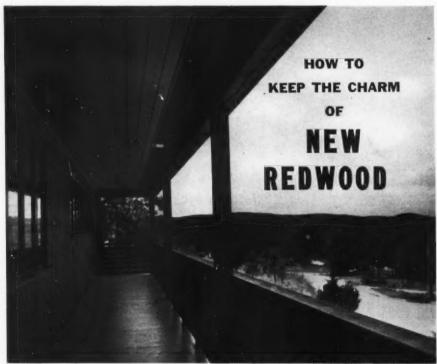
The recent design of a standard building using only 2.25 lb of structural steel per sq ft of floor surface is reported to have been made possible by the employment of Wheeling Tri-Rib steel roof deck. The manufacturer cites this example as evidence that - paradoxical though it may seem - the use of steel roof deck can actually cut total steel construction requirements in a building. Materials savings are said to be particularly high in one-story industrial structures which have a large roof area. Since the amount of structural steel used in a building depends upon weight to be supported, and since steel deck is one of the lightest decking materials, the total amount of steel in a structure can be reduced considerably by employing the decking, according to the manu-

The extent of material conservation possible is indicated in a recent tabulation quoted by the manufacturer which compares weights per sq ft for various types of structural roofs in place (figures do not include roof membrane, insulation, beams and hung ceiling):

Material	lb	per	sq ft
Steel roof deck			3
Lt wt concrete on metal la	th.		15
Lt wt concrete channel tile	e		12
Poured gypsum on insula.	bd	١	10
Lt wt concrete plank			13
Calcium-silicate tile			6
Reinforced concrete			50

On the basis of this data, it has been computed that employment of steel roof deck for a building 1000 by 200 ft could result in weight savings as much as 9,400,000 lb. Since structural steel and roof are two of the largest items costwise in plant construction, and since choice of roof often governs both, the manufacturer also points to monetary savings possible through use of steel deck. Wheeling Corrugating Co., Wheeling, W. Va.

(Continued on page 262)



Architects: Page, Southerland & Page, Austin, Texas

Cabor's California Redwood Stain actually dyes new redwood its own natural color — keeps it looking fresh and bright — prevents dullness and darkening! Cabor's Redwood Stain penetrates deeply . . . brings out all the character of grain and texture . . . and *maintains* it! The high content of pure creosote oil assures years of protection and beauty.

Write today for an actual sample of Redwood treated with Cabot's California Redwood Stain. Address:

CABOT'S 325 California Redwood

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429 Oliver Building, Boston 9, Mass.

You get the same strength with less steel

when you use American Welded Wire Fabric

● A quick glance at the American Concrete Institute Code will show you how to save steel by buying American Welded Wire Fabric for concrete reinforcement.

In the first place, American Welded Wire Fabric is allowed a 40% greater working stress than ordinary reinforcing materials. That's because our fabric is manufactured by the electric welding process from cold drawn steel wire having a guaranteed yield strength of 56,000 psi. Compare that to other reinforcing materials! Also, cold drawn wire has no well-defined yield point. It continues to resist stress throughout its entire strength range. And the ultimate tensile strength is 70,000 psi. Each welded intersection of the wire in the fabric provides special anchorage of the

reinforcing members in the concrete slab.

When you use American Welded Wire Fabric for reinforced concrete walls, you can use 28% less steel area than with ordinary reinforcing materials. You just don't have to buy so much steel to do your job. This specification is partly due to the high strength of American Welded Wire Fabric, and to its efficient bond provided by small high strength members closely spaced and by the positive anchorage provided by the cross wires rigidly welded to the longitudinal wires.

But here's the best part: American

Welded Wire Fabric is a prefabricated reinforcing material that is easy to install. Labor costs for placing will go down drastically. As a matter of fact, installation is so easy that there's simply no comparison with other materials.

Many standard designs and sizes are now available from jobbers' and dealers' stocks as well as prompt mill shipments to identified projects. Present CMP Regulations assure adequate warehouse stock of Welded Wire Fabric. If you would like further information, or literature, just drop a line to our nearest sales office.





This sketch shows where American Welded Wire Fabric is used in modern concrete buildings. It reinforces walls, floors and roofs, can be draped over beams and girders and wrapped around pillars. Many uses of concrete in irregular structural shapes are made practical by American Welded Wire Fabric reinforcement.

AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL COMPANY

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UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Every type of concrete construction needs



UNITED STATES STEEL

What new development lets doctors "prescribe" room temperatures like medicine?

What modern adaptation of an old remedy is being used to fight children's respiratory ailments?

What new device helps obstetricians make childbirth easier and safer? This is your

Hospital Progress Report From Honeywell



Latest safeguard for expectant mothers now in use at leading university maternity hospitals

Obstetricians at four major university maternity hospitals in United States and Canada are now using a new device which gives advance indications of any abnormality in childbirth labor. Johns Hopkins physicians, in collaboration with Statham Laboratories of Los Angeles, originated this Tokodynamometer, which by means of strain gauges placed on the abdominal wall, measures simultaneously contractions from segments of the muscle of the uterus and charts them electronically on a specially designed Honeywell stripchart recorder. This gives doctors advance indications of any irregularity in the labor in ample time to take corrective measures.



Individual room temperature control being installed in new University of Texas cancer research center

Progress in cancer research will be immeasurably aided when this M. D. Anderson Cancer Hospital for cancer research is completed in the Texas Medical Center in Houston sometime this year. It will be one of the finest equipped hospitals of its type in the world.

In their plans, the administrator, architect and engineer considered patient comfort as well as requirements of the different research laboratories. It was found that Honeywell Individual Room Temperature Control fulfilled the requirements of both research and patient areas.

Architects: MacKie & Kamrath, Houston Consulting Engineers: Lockwood & Andrews, Houston



Now... A thermostat exclusively designed for bospital use!

Physicians, administrators, architects and engineers have often requested a specialtype thermostat that would meet the rigid requirements of hospital use. To meet this need, Honeywell developed this Hospital Thermostat.

Its special features allow maximum hospital operating efficiency. Honeywell's exclusive "Nite-Glowing" dials permit night inspection without disturbing patients! New magnified numerals make readings easier to see. And the specially designed Speed-Set control knob is camouflaged against tampering.

With one in every room, doctors can "prescribe" the exact temperature each patient needs to speed his recovery.



Special high-humidity rooms prove effective treatment for children's respiratory cases

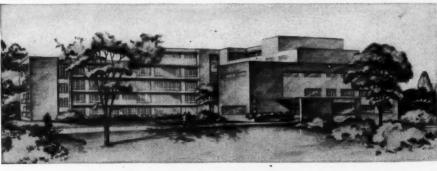
Steam inhalation is an old and popular method for many respiratory ailments. At Chicago's famous Children's Memorial Hospital, this well-known therapy can now be more effectively employed since the recent completion of two modern high-humidity rooms.

Remarkable humidity conditions are being created in these rooms! At normal dry bulb temperatures of 75 to 78 degrees,

humidity can be maintained at 95 to 98%! Everything is controlled from a panel outside the room without interrupting nursing procedures.

These rooms are proving most helpful, for they allow the children to move freely while under treatment. Supplementary therapy is simplified. For example, an oxygen tent can be used simultaneously with humidity treatment.

Architects & Engineers: Puckey & Jenkins, Chicago Mechanical Contractor: Air Comfort Corp., Chicago



New Colorado hospital to be heated throughout with radiant ceiling panels

When this beautiful new Weld County Public Hospital at Greeley, Colorado, was being planned, patient comfort received high consideration by all concerned. For example, the entire building will be heated by radiant pipe coils, concealed in the ceiling. And for accurate, dependable control of temperatures

throughout the building, including the air conditioning in the operating rooms, hospital officials selected Honeywell Individual Room Temperature Control.

Individual Room Temperature Control is the most practical way to compensate for the varying effects of wind, sun, open windows, or internal load.

Architects: Fisher and Fisher, Sidney G. Frazier, Architects Associated, Denver and Greeley, Colorado Consulting Engineers: Samuel R. Lewis and Associates, Chicago, Illinois Mechanical Contractor: Johnson & Davis Plumbing & Heating Co., Denver, Colorado

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First in Controls



For additional information on any of the installations, products or systems mentioned in this report, call one of the 91 Honeywell offices, located in key cities from coast to coast. Or for free bospital literature, fill in the coupon below and mail to us today.

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	"Heating and air conditioning controls for the modern bospital" gives recommendations for sur- gery and maternity sections.
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Ad	dress
Cit	y
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PRODUCTS

(Continued from page 258)

Floor Surface Reinforcement

Available in limited supply, Floor Plate is an 11¾ in. sq plate of .068 in. hot-rolled steel, designed for reinforcement and protection of concrete floor surfaces which are constantly subjected to heavy industrial loads and severe punishment. The manufacturer reports



that the plate can be quickly installed as a new floor surface or over old floors without special tools. Initial installations are said to have revealed no appreciable wear after three years of abusive service. Each plate contains 100 Floor plate (left) has perforations which permit concrete to bond with it (below) forming skid-resistant surface



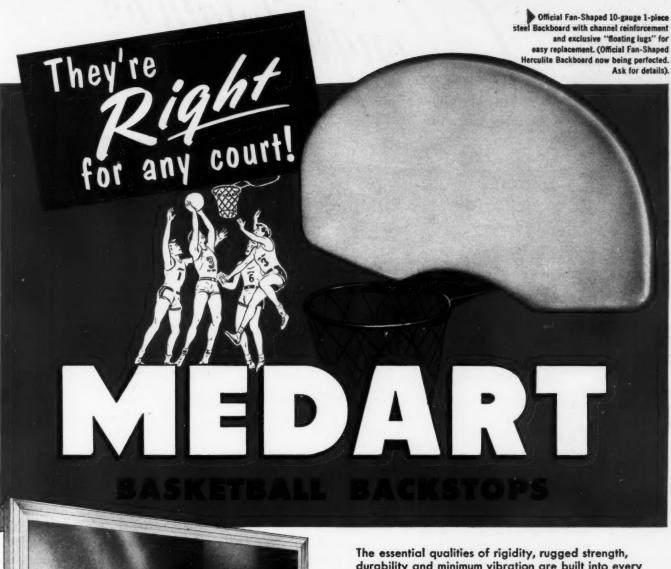
small rectangular holes approx. ½ by 3/4 in. and 100 barbed prongs 3/4 in. long. The prongs anchor the plate firmly to the concrete 100 times per sq ft. The rounded edges of each plate reportedly form a flange that becomes imbedded in the concrete and adds rigidity to the plate. The surface of a concrete floor reinforced with the plate is composed of 74 per cent steel and 26 per cent concrete. Since one floor plate is installed for every sq ft of floor area, determination of quantities needed for an installation is simplified. Besides this, the dimensions of the plate are said to eliminate the need for cutting to fit around posts, machinery and corners. Floors protected with the plate are reported to be safe whether wet or dry, because the abrasive characteristics of the exposed concrete provide resistance to slipping and skidding. Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill.

Wall and Ceiling Panels

Combining durability and beauty, Marlite Hi-Gloss is a prefinished wall and ceiling panel, reportedly low in cost. Used effectively in commercial buildings, schools, hospitals, banks and innumerable other installations, Marlite Hi-Gloss panels are also suited to kitchen, bathroom, utility and recreation room interiors. The panel is available in Plain, Horizontaline and Tile patterns, in a complete color range. The large, wall-size panels may be installed over old or new walls. It is claimed that the baked finish sheds dirt, moisture, grease and grime, and may be easily cleaned with a damp cloth. In addition to Hi-Gloss, the Marlite line includes Deluxe, another prefinished wall panel with a mirrored finish; seven Velwood patterns; and five distinctive Marble patterns. Marsh Wall Products, Inc., Subsidiary of Masonite Corporation, Dover, Ohio.

(Continued on page 266)

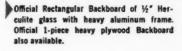




durability and minimum vibration are built into every Basketball Backstop Medart makes. Whether of glass, wood or steel, they will never distort, buckle, splinter or wear.

But to insure the maintenance of these necessary attributes, Medart assumes responsibility far beyond that of simply supplying fine Backboards. From the time Medart Backstops become a part of the specifications, Medart engineers accept the task of analyzing structural conditions, playing requirements and other considerations -including budget—then help choose exactly the RIGHT Backstop for the building. Only through this combination of correct Backstop, "Tailored-To-The-Job" and properly erected, can a completely official and satisfactory installation be assured.

Insist upon Medart Basketball Backstops. Nearly 80 years of "know-how," acquired through the installation of thousands of backstops in all conceivable types of buildings throughout the world, is at your service.





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World's Only Complete Single Source For Gymnasium Equipment Lockerobes # Grade-Rabes

Basketball Backstops

Physical Fitness Apparatus

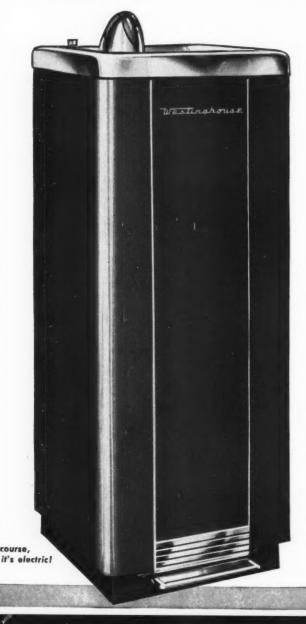
Basketball & Football **Szereheards**

Physical Therapy



ongratulations To ARCHITECTS: Bealer and Wilhoit of Knoxville, Tennessee

Business Administration Building University of Tennessee



Education is one secret weapon of America . . . the millions of undergraduates who, tomorrow, will keep safe the free enterprise of today. As new academic buildings spring up across the continent, administrators turn more and more to Westinghouse for everything from Home Economics electrical appliances to Water Coolers.

Here at the University of Tennessee you'll find Westinghouse Water Coolers (Model WA13A) efficiently meet all the engineering specifications. Like all models, they occupy only 14" x 14" of floor space. The blue-grey, baked-on enamel and stainless steel trim complement the architectural features of this artistic university building.

WA13A...13-gallon capacity. Stainless steel top. Foot-pedal control. Automatic stream-height regulator. Anti-squirt bubbler. 11 other models available from 1 gallon to 22½ gallons.







WW14A 14-Gallon, Water Cooled



Institutions throughout America turn more and more to Westinghouse for Water Coolers. They're known as the Blue Chip Line of the Industry... because of the outstanding percentage of the industry sales obtained in 1951, and a pace which is accelerated this year.

reputation for economical performance, their adaptation to every need as well as the long-appreciated 5-Year Guarantee Plan. This covers the entire Hermetically-Sealed Refrigeration System: motor-compressor, evaporator and condenser... not just the motor-compressor alone.

Westinghouse models cover a full line in every capacity for every need... Bottle, Pressure, Compartment and Remote Types for industrial plants, military installations, institutions, stores, or buildings, large or small.

your immediate needs, Westinghouse has a complete Architect's Kit; a data file which includes large-sized, readable and accurate engineer's drawings. This file is yours for the asking. Drop a card to the Advertising Department, Westinghouse Electric Corporation, 653 Page Boulevard, Springfield 2, Massachusetts.

Water Coolers by Westinghouse deserve your consideration because here is a great internationally known organization which is yours all the way, with assuring assistance that the Water Cooler requirements are adequate, efficient and guaranteed for any construction now on your drawing board or contemplated for the future. With this assurance it's profitable to specify Westinghouse because . . .

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WAC2 Compartment Pressure Cook



WAP13A 7-Gallon, Plain Top, Air Cooled



WWP22 13-Gallon, Plain Top, Water Coole



WBC1 Compartmen Bottle Coole



PRODUCTS

(Continued from page 262)

Fibrous Glass Fabric for Roofing and Waterproofing

An inert material composed of Fibreglas yarn, Glasfab is offered by the manufacturer as an effective new fabric for roofing and waterproofing. It is reportedly not subject to "wicking" and other types of deterioration, thus pro-



Fabric has open weave of flat fibers

viding roofing and other waterproofing installations with a non-deteriorating support. It is also described as holding waterproofing materials in uniform suspension, eliminating cracking and other faults which result in eventual breakdown of the waterproofing. The flat fiber structure and weave of the fabric are said to permit great flexibility, allowing tight application to uneven shapes and contours, and simplifying application on corners and other uneven surfaces. The open weave also permits penetration of bitumen, so that glass fibers are completely surrounded and locked in the roof coating. Available in widths of 2 to 45 in, and in rolls of 50 to 500 vd. A 300-ft roll, 36 in. wide is reported to weigh only 91/2 lb. Twinsburg-Miller Corp., Twinsburg, Ohio.

Alloy Can Replace Copper As Flashing and Sheet Metal

One way of easing the copper shortage is indicated by the manufacturer of Chinc, a copper-zinc, non-ferrous alloy sheet metal. The alloy is said to cost considerably less than its equivalent in copper, and to be non-staining and corrosion-resistant. For these reasons, the manufacturer believes that it may some day be generally used in place of copper for through-wall flashing and similar purposes. The ductile metal is also reported to solder easily and form readily, to resist salt air, moisture and smoke fumes, and to require no painting. It is uncoated and weathers to a permanent battleship gray. It is also said to be unaffected by lime or cement mortar and will not corrode in the mortar joint. The metal is available in rolls, sheets, flashing and 3-way flashing. Standard thickness is U. S. ga. .018 in., weighing 2/3 lb per sq ft, but special thicknesses and sizes are available on special order. Cheney Flashing Co., 623 Prospect St., Trenton, N. J.

Grounded Portable Light

McGill Lamp Guards now include a new series of grounded portable lights that feature a three-wire convenience outlet as a part of their molded handles. The outlet is said to make it possible to connect drills, saws or other power tools at the working area quickly and without extra extension cords.

To be known as the 5000-G series, the guards were reportedly designed especially to promote safety in the handling of portable lighting and the power tools attached at the convenience outlet. The series has two cage designs. One

(Continued on page 268)



Bradley Washfountains provide group washing facilities of maximum cleanliness, convenience and sanitation.

Bradleys are made in 36-in. and 54-in. circular and semi-circular sizes to serve 5 to 10 persons simultaneously. Foot-control of water spray means hands touch nothing

but the water.

For hospitals, institutions, sanitariums, schools, Bradley Washfountains provide the most economical and sanitary means, with the DUO (two-person model, also foot-controlled) for smaller washrooms.

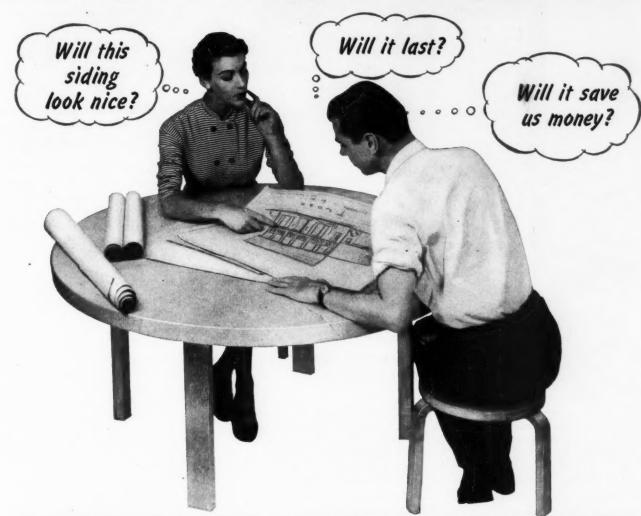
BRADLEY WASHFOUNTAIN CO.



Catalog 5204 mailed on request



What goes on in your clients' minds?

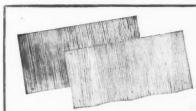


ASBESTONE SIDING SHINGLES

say, "Yes", to all three questions

Show your clients this check list of Asbestone benefits:

	Lifetime	protection	Life	fetime bed	uty 1	Fireproof	V	Weatherproof, we	eather-tig	ht 🖊	Freedom	from r	ot and corrosion
1	Termite-proof	I Ro	dent-proof	1	Insulating	(saves fuel)	1	Needs no paint	VI	lo upkeep	expense	1	Long-range econom



ASBESTONE SIDING SHINGLES

Straight edge or Wavy edge

Finish: Deep wood-grain texture

Colors: White, Gray, Bufftone Blend, Greentone Blend

OTHER LIFETIME PRODUCTS MADE BY ASBESTONE



Asbestone Roofina Shingles

—designs and colors that sell on sight



Corrugated Roofing and Siding

—Standard "400" and Economy "250" weights



Asbestone Wallboard

-Utility and Flexible grades—for interior and exterior use

Specialists in Asbestos-Cement Building Products for over 25 years

Asbestone Corporation 5386 Tchoupitoulas St., New Orleans, La. Please send us free specification catalog and literature.

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MODERN IDEA BATH FACILITIES

In clean-lined functional design, structural integrity, service-tested materials, Weisway Cabinet Showers fit perfectly with the most advanced building techniques—and provide the perfect answer to the rapidly growing preference for shower bathing. Space-saving Weisways make added baths easily possible in homes of all sizes.

Comfort, safety, sanitation are all served by leakproof Weisways with the exclusive Foot-Grip, No-Slip floor of vitreous porcelain—easy to keep clean and thoroughly non-absorbent. Weisways are complete, self-contained units, not affected by shrinking or settling of surrounding materials.

Your clients are assured long years of satisfaction, and your reputation is protected when you specify Weisway Cabinet

Showers. Write for catalog with detailed information.

vitreous porcelain enamel, fused on one piece of heavy enameling iron, provides a positively leak-proof base. Textured floor is safe, comfortable and sanitary.

WEIS MANUFACTURING CO., INC.



Architectural Engineering

PRODUCTS

(Continued from page 266)

of these features a concentrating end lens and rotary reflector for focusing light, while the other has the manufacturer's standard non-rolling cage. The molded phenolic handles are described as non-conductive, heat and impact resistant and positively insulated. The complete assembly will reportedly resist oils, greases, flame, moisture, abrasion and some acids. McGill Mfg. Co., Valparaiso, Ind.

Kitchen Cabinets

A new line of kitchen cabinets is now available in a natural wood finish, known as the Natural-Line. Featuring new base and wall cabinets, built to accommodate the new built-in ovens and cooking units of leading manufacturers, the line also includes a base cabinet which has been designed to store an electric food mixer and its accessories. Doors are equipped with cushioned silencers, and drawers are of rustless,



Specially designed cabinet for mixer has table-top and storage drawer

polished aluminum. Extra features available include swing-out shelves, towel driers, tray compartments and vegetable drawers. In addition to the natural wood finish, the units may be obtained in any of the seven following colors: Mackinac Green, Garden Yellow, Serene Blue, Desert Sand, Mist Green, Twilight Gray and White. The new line was on display at the January Builders Show in Chicago. Kitchen Maid Corporation, 123 Snowden St., Andrews, Ind.

(Continued on page 270)



M. Quay SEASONMAKERS

INDIVIDUAL ROOM AIR CONDITIONERS

(For use with central chilled water or freon system)

A best seller for you and the best buy for your customer! McQuay Seasonmakers satisfy the demand for individual room comfort. The Seasonmaker's quiet operation and attractive design are welcome additions to any multiroom building.

The Seasonmaker's year 'round performance actually "make the seasons come to you"
... providing heated, and filtered air in winter; cooled, dehumidified, and filtered air in summer.



CEILING TYPE for suspended mounting

Famous McQuay Ripple-Fin coil construction assures long life and dependable service. These units are easy to install and maintain. Available in three sizes and types to fit the requirements of old and new buildings. Write for Condensed Bulletin 700 for full details. Representatives in all principal cities.



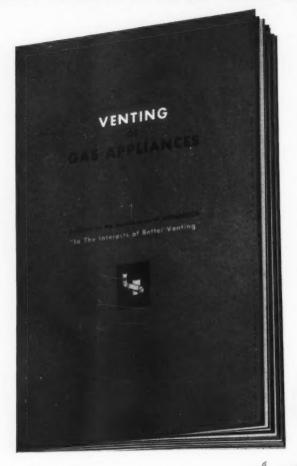
M. Quay



1605 BROADWAY STREET N. E., MINNEAPOLIS 13, MINN.

AIR CONDITIONING . REFRIGERATION . HEATING

this booklet gives you complete information on VENTING OF GAS APPLIANCES



- * the venting problem
- ★ 5 basic rules for gravity vents
- * do's and don'ts of gas venting
- * wall heater installations
- * tips on vent installation

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WILLIAM WALLACE COMPANY, BELMONT, CALIFORNIA

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NAME

TITLE

COMPANY

ADDRESS

CITY

ZONE

STATE

Architectural Engineering

PRODUCTS

(Continued from page 268)

Adjustable Ceiling Fixture

Adjustable to any desired height, a ceiling light fixture has recently been imported from Scandinavia for a new collection. The light features a white painted aluminum shade and has brass



Scandinavian import combines flexibility and good design

fittings. An adjustable pulley controls the position of the fixture, making it readily adaptable to various uses. Richards-Morgenthau Company, 225 5th Ave., New York, N. Y.

Penetrating Seal For Simplified Floor Maintenance

Reported to provide a simple and economical method of floor care, Hil-Tex plastic-type seal has been developed after extensive research and field testing. According to the manufacturer, the seal can be used on asphalt tile, rubber tile, linoleum, terrazzo and cement — in short, on all porous and semi-porous floors with the exception of wood. It is said to seal, bridge pores and cracks, provide a smooth, even surface, and furnish a bond between floors and wax-type finishes. The seal reportedly pre-

(Continued on page 272)

YOU GET 4 EXCLUSIVE ADVANTAGES

FLEUR · O · LIER

Only Fleur-O-Lier fixtures are rated on the Fleur-O-Lier Index Rating System. This gives illuminating characteristics, shielding, brightness, etc., for each fixture.

Complete photometric test data including distribution curves and coefficients of utilization tables are computed by Electrical Testing Laboratories, Inc., and are provided for every

fleur-O-Lier
fixtures are certified
by Electrical Testing
Laboratories, Inc., as complying with rigid specifications
covering electrical and
mechanical construction.

More than 300 different Fleur-O-Lier fixtures made by nearly 30 manufacturers give you a wide selection from which to choose.

THESE 4 ADVANTAGES ASSURE fighting Satisfaction WHEN YOU SPECIFY FLEUR-O-LIER

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FLEUR · O · LIER

Manufacturers

2116 Keith Building

Cleveland 15, Ohio

Fleur-O-Lier is not the name of an individual manufacturer but of a group of fixtures made by leading manufacturers.

Participation in the Fleur-O-Lier program is open to an manufacturer who complies with Fleur-O-Lier requirements.



APRIL 1952

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Architectural Engineering

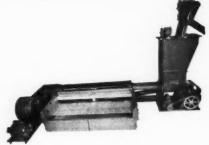
PRODUCTS

(Continued from page 270)

vents waxes from penetrating into pores and imparting a yellow cast to the floor. It is said to be resistant to oils, grease, fats, alcohols, water, soap and a great many aliphatic hydrocarbons. It is also unaffected by acid or alkaline salts, sunlight or ozone. Wide coverage is reported to make it economical to use and application is said to be simple. Hillyard Chemical Co., St. Joseph, Mo.

Automatic Coal Stoker

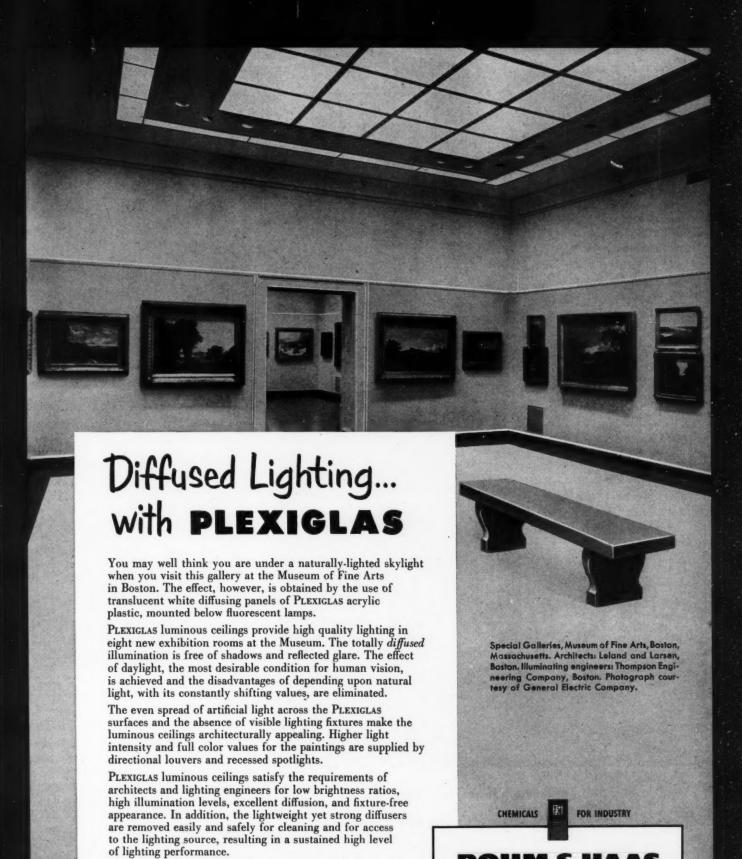
The Motorstoker Crossfeed, a commercial and light industrial automatic hard coal burner is currently available in stoker capacities of either 200 or 300 lb coal per hr. Design of the burner is said to provide several advantages. All mov-



Stoker has moving parts outside boiler

ing parts are outside of the boiler, away from the high temperature zone. Feedrate adjustments are made from the outside of the unit without disturbing the fire. A positive overload release is reported to protect the unit from damage, and operating requirements are said to be low. The stoker can be mounted on either side of the boiler, in single or double installations, and can be equipped for either bin or hopper feeding. In most cases, according to the manufacturer, no expensive boiler alterations are required, and, because of its compact design, the front of the boiler is kept clear for easy cleaning of the unit. Approved by the Anthracite Institute, the burner has been successfully installed in a number of varied types of buildings. Motorstoker Div., Hershey Machine & Foundry Co., Manheim, Pa.

(Continued on page 274)



If you have a lighting problem, investigate "daylighting" with a PLEXIGLAS luminous ceiling. We will be glad to send

you-technical details about the installation shown above.

The Rohm & Haas exhibit at the Fourth International Lighting Exposition and Conference, May 6-9, Public Auditorium, Cleveland, Ohio, will be in Booth 153.

Write for them.

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

PLEXIGLAS is a trademark, Reg. U.S. Pat. Off. and other principal countries in the Western Hemisphere.

Canadian Distributor: Crystal Glass & Plastics, Ltd., 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.

PRODUCTS

(Continued from page 272)

Low-Pressure Steam Control

The Pressuretrol, a reportedly tamperproof, low-pressure steam control is now available in quantity from Minneapolis-Honeywell. The unit can be applied to almost any domestic steam job, according to the manufacturer, and its low cost is said to have made it possible to



Low-pressure steam control has concealed adjustment which prevents tampering

furnish it in quantity to manufacturers for installation as standard equipment on their own boilers. A concealed adjustment which prevents owners from tampering with the setting is expected to diminish service calls considerably. The control is factory-set and installation is described as simple. Conduit outlets are incorporated into the design of the unit. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., Minneapolis, Minn.

Floor Coverings

A new line of carpets is now available on the market, designed to harmonize with both traditional and contemporary decor. Known as the *Marion V. Dorn Collection*, the carpets are grouped into two classifications: designs deriving their motifs from the ancient Egyp-

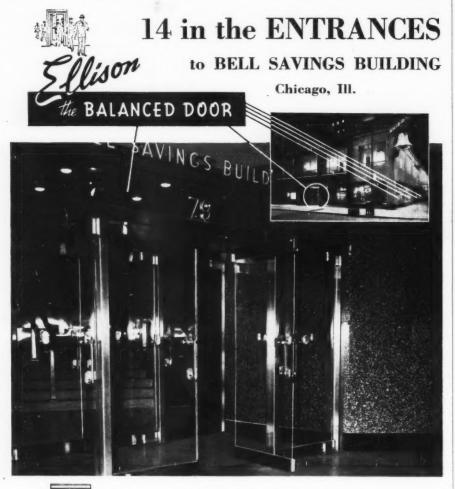


A geometric pattern of lines on blocks of color is new rug design, "Parallel"

de

tians, Grecians and Mayans and stressing color and texture in their geometric patterns. The second group takes inspiration from natural forms, such as cloud formations and marble, and use the play of light and shade to obtain interesting textural effects. Also introduced were a group of original monogram rugs, custom-made to conform to the taste of the client. The collection is available in any color or combination of colors. All carpets are tufted with random shearing. Varied lengths of pile give a three-dimensional effect to many of the designs. Edward Fields, Inc., 509 Madison Ave., New York, N. Y.

(Continued on page 278)



The Door that lets

BALANCED DOOR

lison

TRAFFIC through QUICKLY

ELLISON BRONZE CO.

Jamestown, New York

representatives in 71 principal cities







GET Service

You can order exactly the kind of floor beauty and design you want from the Flexachrome* menu!

And with beautiful plastic-asbestos Flexachrome tile that is always in style, you'll get service that's topped off with years and years of low-cost maintenance.

What a *range* of rich, true colors you have to choose from! 25 of them. Plain. Marbleized. Subdued. Brilliant.

With the wide range of sizes...custom-made inserts ...and tile-at-a-time installation...you have endless pattern possibilities to fit any mood.

And always remember this about Flexachrome... it is highly resistant to greases, acids and alkalis.

As far as wear is concerned...it's a well known fact that guests can dance on it to their hearts' content...walk all over it...day after day,

for years and years and years. And all without the floor *ever* showing that "morning-after" look!

Flexachrome is a cinch to keep clean...thanks to its smooth, tight, close-textured surface.

Initial expense is kept down by Flexachrome's reasonable material cost and quick, easy installation.

So look in your classified telephone directory for your Tile-Tex* Flooring Contractor...and have him "tell all" about Flexachrome. It makes "good listening." Call him today.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois.

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada.

*Registered Trademark, The Flintkote Company

the only difference...





It's the same room in both cases protected by a Viking Sprinkler system . . . the general offices of the Chicago Merchandise Mart . . . Nothing is changed . . . except the sprinkler heads. Note the added attractiveness and unmarred symmetry of this room after the change to Viking Flush Type Sprinklers. Viking Flush Type Sprinklers blend quietly with any room design or motif. They are unexcelled from the standpoint of design . . . unexcelled from the standpoint of water distribution.

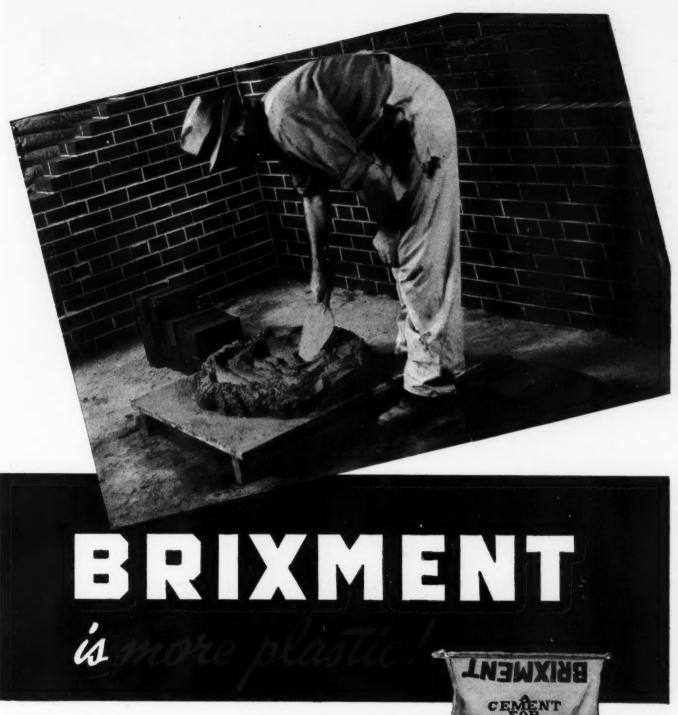
The Viking Flush Type Head exemplifies the entire Viking

Sprinkler line . . . is visual evidence of the farsighted engineering, the up-to-date practical engineering that goes into every piece of equipment in the Viking Automatic Sprinkler line . . . the most complete line in the industry.

There is a Viking representative near you... ready to help you with the design and installation of a modern Viking fire protection system for your next building. You'll find that his staff of engineers, his experienced, full-time installation crews and his completely stocked warehouse, located in your area, will make the design and installation of a sprinkler system quick and easy for you. Contact him, today.

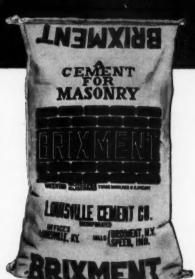


Write for your copy of "Fire and Your Business"... facts on how a Viking Sprinkler System can protect your buildings from fire; forever. the corporation



ONE of the most outstanding characteristics of Brixment is its plasticity. Its working qualities are comparable to those of lime putty. Because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand, and still make good workable mortar. . . .

This exceptional workability makes it easy for the bricklayer to secure neat, clean brickwork, with the brick properly bedded and the joints well filled. The final result is a better job, at lower cost.



LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

PRODUCTS

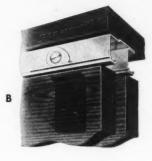
(Continued from page 274)

Inexpensive Sliding Door Hardware

Rocket 1000 is the name for a new line of sliding door hardware developed for use in low and moderate cost homes. Described by the manufacturer as encompassing many of the high standards of more expensive hardware, the new

line is available for both single and multiple sliding doors. Simple installation is said to suit it for a number of varied applications, including by-passing wardrobe doors, interior room doors, cabinets and store fixtures. The hardware requires only 1 in. headroom and features Nylon ball-bearing rollers, thus avoiding metal-to-metal contact between roller and track, and reportedly insuring quiet operation. The rollers are spun riveted to the carrier housing and tested for rigidity. The track is mounted flush with the opening and its front face





Low cost sliding door hardware has ball-bearing rollers made of nylon

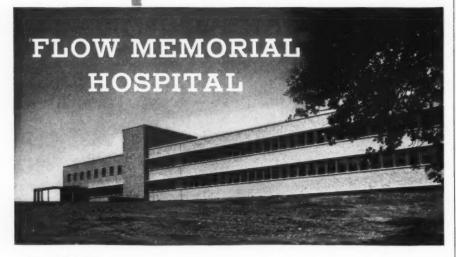
is primed for paint and can be used as facia trim. This latter feature is cited as making for sizeable trim cost savings in large installations. The hardware is packaged for 4-, 5-, 6- and 8-in. single and multiple units, with a special package for 3-door, 3-in. wardrobe installations. The line includes a guide rail for use on back of doors which cannot be grooved. All door sizes up to 50 lb per door can reportedly be accommodated by the hardware. Grant Pulley and Hardware Co., 31-85 Whitestone Pkway, Flushing, N. Y.

Textiles

A full range of color combinations and solids is to be found in the new spring collection of Greeff fabrics, consisting of nearly 80 new designs. Included in the group are The Westerfield Collection, nine documentary hand-printed cottons; the Imported Prints, which include handblocked linens and glazed chintzes; Old England and Cockade Hand Prints, mostly large in scale and containing many striking patterns in the contemporary feeling; and the Textured Fabrics, containing a variety of weaves and featuring an outstanding selection of colors. Some of the more dramatic colors to be found in the complete line are pumpkin and yellow used together, mauve and its related hues, and colors with a masculine feeling, such as brown with black, sepia with grey, etc. Greeff Fabrics, Inc., 4 E. 53rd St., New York 22, N. Y.

(Continued on page 280)

STAIRWAYS, CORRIDORS and GENERAL SERVICE AREAS COVERED WITH Iroment



Bennet & Crittenden Architects

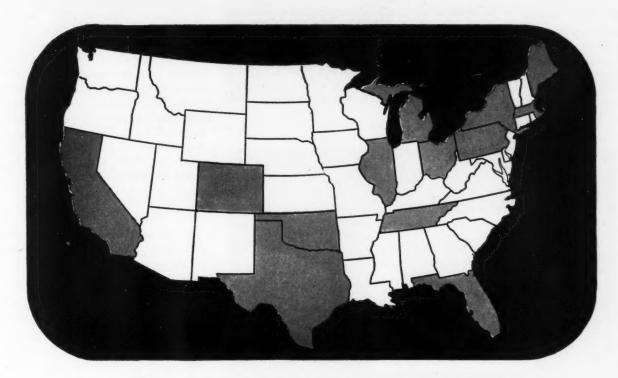
Hydroment combines compressive strength, surface density, and wear resistance to a degree found in no other single material. Available in natural or colored form, its applications are virtually limitless. Because of its lasting permanent beauty and matchless durability, it has won the favor of architects from coast-to-coast.

PRODUCT OF

4805 LEXINGTON AVE., CLEVELAND 3, OHIO

SINCE 1881

PRESTRESSED CONCRETE



Now accepted from Coast to Coast

BRIDGES in Massachusetts, more bridges in Pennsylvania, a factory roof in Ohio, bridges and buildings in Tennessee, a ramp garage in California... these and scores of other construction jobs have been designed to use prestressed concrete. Every week more and more leading engineers investigate, then accept, this new material.

To meet the growing demand for the special tensioning members required, Roebling has developed a full line of new products. They are Prestressed Concrete Wire and Strand for pre-tensioning... Strand and Fittings for post-tensioning. Each has been developed to meet the special requirements of any prestressed concrete design.

Roebling Wire and Strand for pre-tensioning are made of high tensile acid steel that results in products of exceptionally high elastic characteristics. And they are specially treated to greatly increase their bonding quality, too.

Roebling Strands for post-tensioning are fabricated from special hot galvanized acid steel wire

... insuring exceedingly high strength and elastic properties. At recommended stresses, there will be complete safety... no relaxation of the steel during the life of the structure. Our fittings develop the full strength of the strand without exceeding the yield point of any of their parts. They are attached at a Roebling plant and proof-loaded beyond recommended stresses. This factory-assembled method brings huge labor savings on the job.

Prestressed Concrete is growing by leaps and bounds. Keep abreast of the Roebling product developments. Write Prestressed Concrete Department, John A. Roebling's Sons Co., Trenton 2, N. J.



Roebling Prestressed Concrete Strand and its specially developed fitting which are available in a complete range of sizes from 5/8" to 19/16". With an inexpensive hydraulic ram, assemblies such as these can be brought to stress in a matter of minutes.

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FREDONIA AVE . CLEVELAND, 701 ST. CLAIR AVE, N. E.
. DENVER, 4801 JACKSON ST . DETROIT, 915 FIBHER
BLDG . HOUSTON, 6216 NAVIGATION BLVD . LOS
ANGELES, 5340 E. HARSOR ST . NEW YORK,
19 RECTOR ST . CDESSA, TEXAS, 1920 E. 2ND ST
. PHILADELPHIA, 230 VINE ST . SAN
FRANCISCO, 1740 177H ST . SEATTLE, 900
1ST AVE S. . TULESA, 321 N.
CHEYENNE ST . EXPORT SALES
OFFICE, TRENTON 2, N. J.
DILLING

PRODUCTS

(Continued from page 278)

New Furniture Group

Exhibited recently at the Los Angeles Furniture Mart was the new Forecaster furniture group. Including more than 30 pieces, the furniture is made of solid birch and is offered either in a lustrous natural finish or in a rich cordovan. Designed for bedroom, dining and living



... to spread light on a wall Century's #365 recessed adjustable downlight with 55-degree spread lens is low surface brightness at the source. CENTURY LIGHTING, INC., NEW YORK 36 626 NORTH ROBERTSON

Decorative 30-in. hutch is supported by 48-in. bench to form attractive setting

room, the pieces are flexible and may be stacked, if desired. The group contains three different sized benches which serve as bases for the various chests. Some of the features of the furniture include a "touchlatch" fastener on the hutch cupboard, cane paneling on the door of chest, brass tips on cabinet legs, adjustable shelves, a magazine shelf incorporated into the bookcase, and molded plywood pulls on all drawers. Seating furniture may be had with either black metal or birch legs. Gillcraft Furniture Company, 106 E. Jefferson Blvd., Los Angeles, Cal.

Solid Sliding Door

Made of Novoply, National Slid-o-o-rs are described as being solid and of the same quality and thickness throughout, and, according to the manufacturer, are guaranteed not to warp, The doors slide on ball-bearing rollers and are equipped with adjustable rearslide guides to allow for any discrepancy in header height. The rear guides are also reported to permit removal of the doors and to fasten securely to prevent the doors from falling from casing. Jambs and headers are of hardwood, and the jambs are grooved so that any discrepancies in the plumb line are covered. Saddles are of oak, to blend in readily with finished flooring. The Novoply from which the doors are made will reportedly take a smooth paint finish without bleeding or crinkling. Facia is supplied with the doors to improve appearance. Installation is described as a simple matter, and cost is said to be less than that of conventional doors. The manufacturer also states that the doors operate silently. National Door Co., Michigan Ave., off Rte 29, Kenilworth, N. J.

Outdoor Furniture

A new line of Aluminum Outdoor Furniture has recently been introduced by a Miami firm. Including armless lounge chairs of anodized tubular aluminum, the items feature a new "Perma-Gleam" finish, mirror-like in appearance, and are claimed to be long lasting and corrosion proof. The seats of the chairs are of plastic webbing, available in several attractive colors. Also included in the group are a card-dining table and chairs, the table top of natural finished cypress wood with an aluminum

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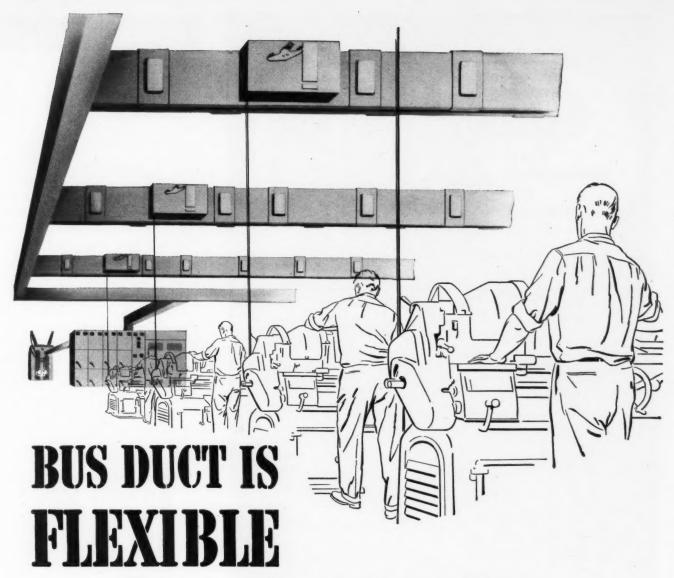
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from transformers to machines

Westinghouse Bus Duct can help you provide better power distribution and lick rising cost curves three ways:

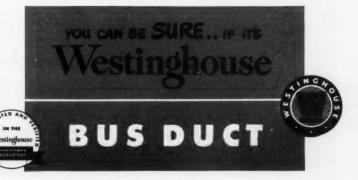
First, Westinghouse Plug-in Duct distributes power more dependably to points of consumption—handles momentary overloads safely with minimum power loss, without breakdown. Prestite® insulators completely insulate plug-in stabs, eliminate hazards of accidental contact with busbars. Foot for foot Westinghouse Bus Duct delivers more power than same-rated systems of wireway or conduit.

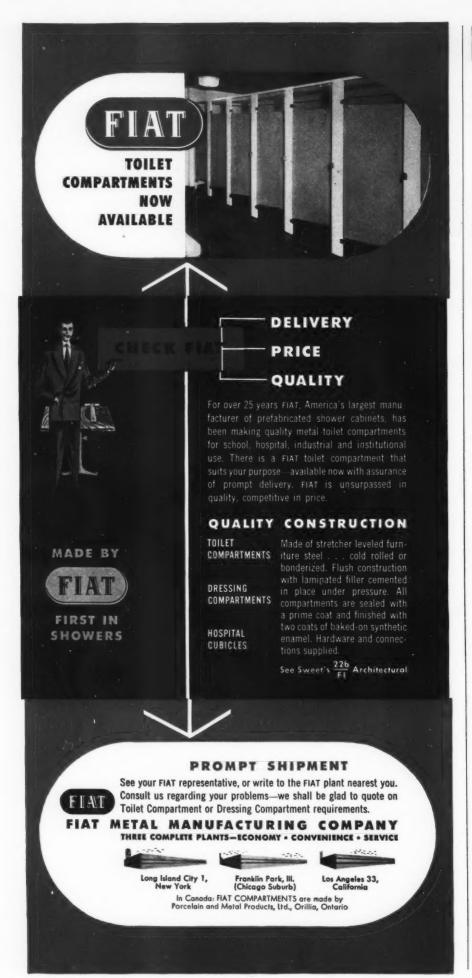
Second, Westinghouse Bus Duct is installed quickly and easily, minimizing outage time, labor time. Completely prefabricated sections are convenient to handle and mount; cantilever hangers are easy to align.

Third, for convenience in installing or relocating machinery quickly, Westinghouse Bus Duct is equipped with plug-in receptacles every foot—no laborious, costly cutting and splicing of cable. To relocate duct itself, simply dismantle and remount sections—minimum loss of operating time, no waste of equipment.

Call your Westinghouse representative for help on power distribution problems, or write for Bus Duct Manual B-4272-A, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

J-30058





Architectural Engineering

PRODUCTS

(Continued from page 280)

base; a plastic webbed and tubular aluminum sun screen, adjustable by means of cantilevered weighted ends; and low, deep-seated spring chairs. Donson Corporation, 3700 N. W. 78th St., Miami 38, Fla.

Fire Hose Station For Small Buildings

A new degree of safety for small premises — dwellings, shops, resorts, farm buildings, etc. — is reported to be afforded by the Allenco Jr. Fire Hose Station. Consisting of a compact welded steel cabinet in which is stored a linen hose attached to a valve connected to the regular water supply, the station is said to be as easy to use as a garden



Fire hose station delivers up to six gal. water per minute to fight blazes

hose and to have no complicated mechanisms. Two types of cabinets are available, recessed or wall mounted, and a choice of three hose lengths, 30, 40 or 50 ft, is offered. An instant-release hose rack reportedly guards against delays in attacking fire or re-storing hose. Mounted on the door of the cabinet, the rack has a 180 deg swing and is said to allow maximum reach with hose in any direction. Couplings, nozzle and valve are all of brass. The nozzle locks into the hose and cannot be removed. It is easily adjustable from full force to foggy spray. The station can deliver up to six gal. water per min., according to the manufacturer. W. D. Allen Mfg. Co., 566 W. Lake St., Chicago 6, Ill.

(Continued on page 286)



Tom Sawyer Motor Inn, Albany, N. Y., 100 rooms with 100 baths. Highly rated by A.A.A... Radiant Heating System designed by LeValley-McLeod, Inc. of Schenectady, and installed by A. J. Eckert Co., Albany, N. Y... includes 5 zones—completely Sarcotherm equipped.

Today the luxurious motels which are rapidly displacing the old overnight cabins along our highways from coast to coast, include central heat among the hotel comforts offered.

Heating of the one-story, spread-out buildings is usually by forced hot water or radiant means, for which

SARCOTHERM

weather-compensated temperature control with continuous circulation is unequalled.

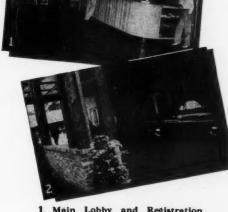
We have pioneered in this field and our experience is at the disposal of architects and engineers who are designing motor courts and wish to include the latest in automatic heating. Here are a few of the Motels recently equipped with Sarcotherm Controls:

Newberry Motel, Russelville, Ky.
Miami Courts Tourist Cabins, Salisbury, Md.
Hotel Sleep, Rahway, N. J.
Garden Motor Lodge, Troy Hills, N. J.
Dutch Maid Motor Lodge No. 2, Woodbridge, N. J.
Smith's Tourist Court, R.F.D., Lynchburg, Va.
Van Winkle Motel, Everett, Washington
Snyder's Court, North Bend, Washington
Leonard Auto Court, Parkland, Washington

SARCOTHERM CONTROLS, INC.

Empire State Bidg., New York 1, N. Y. • Represented in principal cities

A SARCO PRODUCT



- Main Lobby and Registration Desk at Tom Sawyer Motor Inn.
- Friends meet at the main entrance in the atmosphere of an exclusive country club.



- 3. The heart of the Sarcotherm control system for radiant or forced hot water heating is this unique control valve. It is actuated by liquid expansion thermostats, one located outside the building and one in the valve itself. Between them they anticipate changes in heat loss ratio, thus maintaining comfort temperatures under all conditions.
- 4. The Sarcotherm Comfort Control "Thermoray" is an extremely sensitive thermostat affected by both radiation and convection.

23

architects of

STATE MENTAL HOSPITAL

Hastings, Minnesota

tell why they go
to Sweet's File
for manufacturers' catalogs





"office is 'built around' Sweet's File"

says Roy N. Thorshov

"Our office is located on two floors and, in a central and convenient spot on each floor, there is a Sweet's File.

"We are literally 'built around' them.

"We refer to the catalogs in Sweet's constantly. When data on a product is not included in Sweet's, we often have difficulty in finding it, or fail to find it.

"In a city the size of Minneapolis, many manufacturers do not maintain representatives. It is especially important for them to have their catalogs in Sweet's File as this is the surest way to keep in contact."



"our basic source of information"

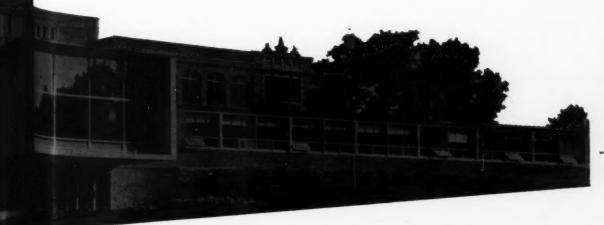
says Robert G. Cerny

"In our office, Sweet's File is the basic source of information on building materials and equipment. Its indexing and cross reference are unique and a great time saver.

"Catalogs sent to us individually get misplaced, but the catalogs filed in Sweet's are always on hand and easy to find when we need them.

"We wish all manufacturers realized the importance of including sufficient factual data in their catalogs. Some catalogs in Sweet's could be improved in this respect. Also, a list of branch offices and sales representatives is vital information which should be included by each manufacturer.

"Many sales representatives offer the fact that their companies' catalogs are in Sweet's File as evidence of quality and national standing. We, ourselves, incline toward this view."



Administration and Receiving Buildings State Mental Hospital Hastings, Minnesota

Thorshov & Cerny, Inc., Architects Minneapolis, Minnesota



Sweet's Catalog Service

DIVISION OF F. W. DODGE CORPORATION, 119 WEST 40TH STREET, NEW YORK 18, N.Y.

Tomorrow's Buildings To Demand More Attention To Door Efficiency



Like the rolling action of the wheel, the smooth upward operation of Kinnear Rolling Doors involves basic, unchanging principles of engineering efficiency. The door's advantages have been proved in thousands of installations, through more than half a century.

Today the dollar-saving importance of these Kinnear advantages is getting closer attention from building designers everywhere. As building construction, operation and maintenance costs continue to rise, the space, time, labor and construction costs that can be saved with efficient doors are major items in any business operation.

Kinnear's rugged curtain of interlocking metal slats opens straight upward. It coils compactly out of the way above the opening. Floor, wall and even ceiling space remain fully usable at all times. The door clears the opening from jamb to jamb, and from floor to lintel, completely out of traffic's way.

When open, it is safe from damage by wind or vehicles. When closed, it presents an all-metal barrier that assures extra protection against storms, intruders, and fire.

In addition, Kinnear Rolling Doors provide smooth, easy operation under all conditions. They may be controlled manually, mechanically (by chain or crank) or electrically. Motor operated doors can be equipped with any number of remote control switches, for highest convenience. Kinnear Rolling Doors are built of various metals, in any size, for easy installation in old or new buildings. Let us send you complete information.

The KINNEAR Manufacturing Co.

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1860-80 Fields Ave., Columbus 16, Ohio 1742 Yosemite Ave., San Francisco 24, Calif. Offices and Agents in All Principal Cities



Architectural Engineering

PRODUCTS

(Continued from page 282)

Contemporary Desk

Designed so that it may be placed at right angles to the wall, the *Gio Ponti Desk* is one of a group of "Modern by Singer" pieces, recently introduced to the market. Featuring a long bookshelf at the back, the kneehole side has con-



Desk features long bookshelf in rear

cealed finger holds in the "floating" drawers. Constructed of sturdy walnut, the desk is graceful and handsome. It was designed by the Italian architect-designer, Gio Ponti, along with several other pieces of furniture he created for the Singer collection. M. Singer & Sons, 36 E. 19th St., New York 3, N. Y.

New Fabrics

A Sample Service of the latest fabrics on the market is being made available to members of the architectural, decorative and manufacturing fields through a quarterly distributed folder. Included with samples of the materials, which point up color and texture, are photographs of the whole fabric length, showing in detail the over-all pattern. Fabrics suited to upholstery, drapery and casement treatment are included and New York sources are given. Convenient post cards are also enclosed to facilitate ordering larger swatches of the desired samples. Net prices are inserted. New York Showroom, 40 E. 49th St., New York 17, N. Y.

(Continued on page 290)



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BEAUTIFY AS YOU PROTECT-ALL COLORS, ALUMINUM AND WHITE!

RUST-OLEUM may be applied directly over rusted surfaces without removing all the rust! Just remove rust scale and loose particles with wire brush and sharp
scrapers...then apply by brush,
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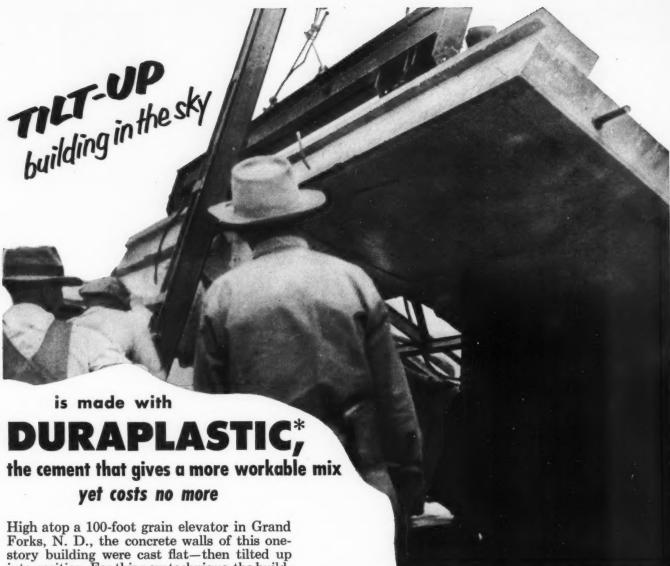
Stopping Rust with RUST-OLEUM 769 D. P. Red Primer



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- ☐ Have a Qualified Representative Call
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- Look for this label be sure it's genuine RUST-OLEUM



story building were cast flat—then tilted up into position. For this new technique, the builders specified a time-tested material - Atlas Duraplastic air-entraining portland cement.

They already had proof of Duraplastic's performance—because the elevator below was also Duraplastic-made! The increased plasticity and cohesiveness of Duraplastic concrete, which aids proper placement and helps to improve surface appearance, resulted in this neat slip-form job.

For more than a decade, Duraplastic has made better concrete for all types of structural jobs. Yet it sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

eneral Contractor: Northern Construction Co., Grand Forks, N. D. DURABLE JOB-Water gain and

segregation are minimized by Duraair-entrainment and resulting concrete is fortified against the effects of freezing-thaw-

*"Duraplastic" is the registered trade mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company

AIR-ENTRAINING PORTLAND CEMENT

Makes Better Concrete at No Extra Cost

"THEATRE GUILD ON THE AIR"-Sponsored by U. S. Steel Subsidiaries-Sunday Evenings-NBC Network

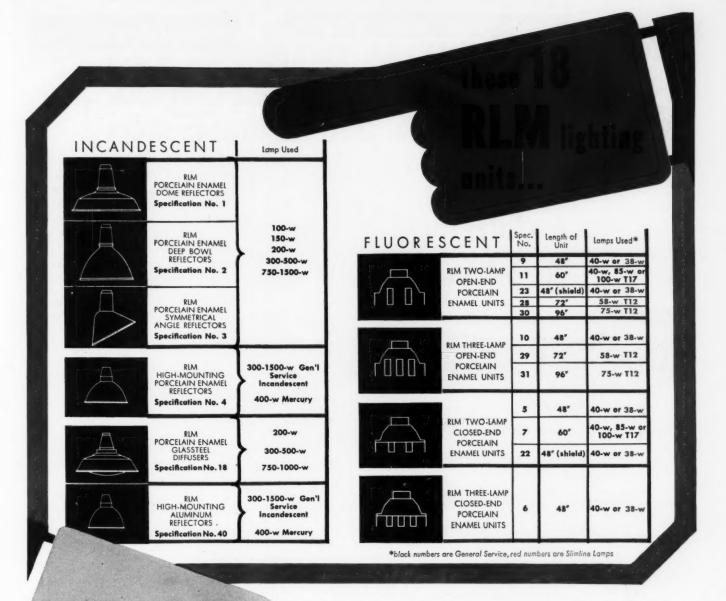
Hogenson Construction Co., Minneapolis, Minn.

THE MIX SHOWS-There's an important difference when the mix is made with Duraplastic cement. Less mixing water is required for a given slump, yet the concrete is more plastic, more uniform and easy to place.

OFFICES:

Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

AR-D-138



Assure You of the Kind of Lighting Performance Needed for...

Defense Production

Defense production demands the highest type of lighting performance to meet the wide range of seeing tasks, varied atmospheric conditions and difficult seeing conditions found today, as American Industry shifts into high gear. To meet these needs economically and dependably, the emphasis is on uninterrupted performance. Therefore it is important to specify units that can be depended upon to provide and

sustain rated light output over years of service. Specification of RLM Lighting Units provides finest assurance of efficient and uninterrupted lighting performance. The RLM Label is a warranty of conformance to minimum standards established by the Institute for lighting performance that meets

most approved modern illuminating practices.

Shown here is a chart, listing the 34 different industrial lighting units for which the RLM Standards Institute has established specifications covering construction, finish, reflector design, ballasts and uniform quality. The Institute is currently engaged in the development of new specifications and revision of present standards in its effort to keep abreast of the latest advancements in illum-

inating engineering. To make certain of lighting performance that is the kind needed for defense production, specify lighting units certified to conform to RLM Standards of Quality.

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CONFORMANCE to the ESSENTIALS of DEFENSE PRODUCTION LIGHTING is Assured when you specify RLM-LABELED Lighting Units: High diffusion with high reflection factor · Top-quality porcelain-enameled reflectors · Approved reflector design · High power factor ballasts · Uniform quality of materials and construction · Conformance to National Electrical Code



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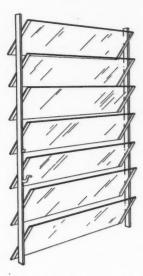
Architectural Engineering

PRODUCTS

(Continued from page 286)

Louvered Windows

Sun-Sash is a louvered window assembly consisting of a pair of 16 ga. galvanized and sheradized steel mechanical uprights with 3 to 14 steel 6 in. glass-louver holders, depending upon the height of the window opening. Inexpensive crystal or sheet glass $\frac{3}{16}$ in. thick, 6 in. high, and up to 40 in. wide,



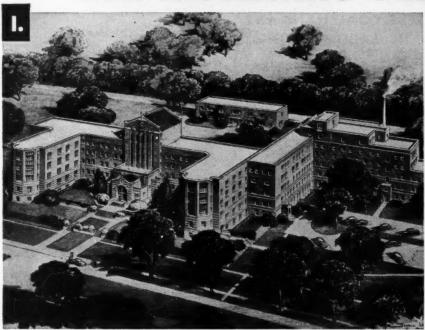
Louvered window has finger-tip control

depending on inside dimensions of the window, is usually used for the louvers, although plastic, metal, wood or composition may also be used.

The left hand upright of the sash has a single operating handle which, when pulled down, rotates all the glass holders in unison through a 105 deg turn. In the closed position, each pane overlaps the other by 1/2 in. and the entire unit is automatically locked. The sash is also reported to stay open in any position because of its precise balance. Further features cited are elimination of fogging, easy installation, draft-free ventilation, inside cleaning of exterior surfaces, and simple, low-cost glass replacement. According to the manufacturer the sash costs less on a sq ft installed basis than most ordinary windows. Sun Sash Co., 38 Park Row, New York 7, N. Y.

(Continued on page 296)

ZONOLITE® CONCRETE ROOFS FOR INSULATING 4 NEW HOSPITALS



1. St. Johns Hospital, Detroit. Zonolite insulating concrete roof fill over structural concrete. Zonolite Acoustical Plastic ceilings. Architect: Maguolo and Quick; General Contractor: Cunningham-Limp; Plastering Contractor: N. DeCample.

designers and builders everywhere. In Detroit, for instance, four well-known architects recently selected Zonolite concrete in four gigantic, new hospitals.

Architects and builders use Zonolite concrete on roofs two important ways:

1. ROOF DECKS—Here Zonolite concrete provides insulation built right

1. ROOF DECKS—Here Zonolite concrete provides insulation built right into the roof deck. Poured over paper-backed wire mesh, high-rib lath, or other suitable forms, it eliminates the need for additional roof insulation.

Because Zonolite vermiculite concrete for roof decks or roof insulation is low cost—permanent—lightweight —firesafe, it is the choice of leading

2. ROOF INSULATION—Poured over existing roofs, such as structural concrete, metal, or wood, Zonolite vermiculite concrete affords permanent, firesafe insulation. Provides the ideal surface for built-up roofing.

Investigate the advantages these Detroit architects found in lightweight Zonolite insulating concrete. Send for brand new roof book with complete specifications and other helpful data. Mail coupon today.



2. Mt. Sinal Jewish Hospital, Detroit. Zonolite concrete roof fill. Architect-Engineers: Albert Kahn Associates; General Contractor: O. W. Burke.



3. Oakwood Hospital, Dearborn. Zonolite concrete roof fill over structural concrete. Zonolite plaster fireproofing throughout. Architect: Henry F. Stanton; General Contractor: W. E. Wood & Co.



4. Mt. Carmel Mercy Hospital addition, Detroit. Zonolite concrete roof insulation over kitchen and dining areas. Architect: Victor Basso; General Contractor: Darin and Armstrong.



BUILT-UP ROOFING

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Gentlemen: Please send new booklet CA-2 on Zonolite concrete roof decks and roof insulation.

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Address.
City. Zone. State.

Architect | Engineer | Draftsman | Contractor |
Other.....

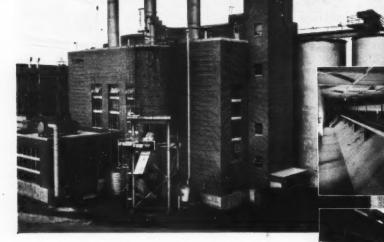
"\$52,000 A YEAR_THAT'S WHAT JEFFREY

SAVES BY BURNING COAL THE MODERN WAY!

AUTOMATIC, DUSTLESS COAL HANDLING SAVES US \$9,980 IN LABOR ALONE, 3 says H. W. deBruin, Vice President

in Charge of Manufacture, The Jeffrey Manufacturing Company, Columbus, Ohio

This modern plant supplies steam to Jeffrey's 48-acre tract of buildings and operations. The new boilers have bettered their expected thermal efficiency of 78%. Compared to the old boiler plant, Jeffrey now gets 20% more steam using the same amount of fuel.



 Handle coal efficiently, fire it properly, and you can save big money! Today, modern coal handling and combustion equipment add greatly to bituminous coal's inherent economy. You can now get anywhere from 10% to 40% more power from each ton of coal than was possible a few years ago.

If you are planning to modernize your present installation, or if you're building a new steam-generating plant, call in a competent consulting engineer. He'll show you how it will pay you well to burn coal in a modern installation designed to meet your specific needs.

· And with coal you get a future dependability no other fuel can offer. Of all America's fuel reserves, 92% is coal. And to supply this coal, America has the world's most productive coal industry. For economy, for dependability, both now and in the future, you can count on coal!

BITUMINOUS COAL INSTITUTE A Department of National Coal Association WASHINGTON, D. C.

The enclosed screw conveyor, shown at the left, delivers coal to the bunker over the firing aisle. The entire coal handling system is controlled by one man. Compared to the old method, Jeffrey saves \$6,080 annually in car-unloading costs alone. Ash removal is completely automatic and dustless, too-saves another \$3,900.

The plant's firing aisle-showing the two-ton traveling weigh larry that delivers coal to the boilers. Steam generating costs, not including depreciation, are-old plant, \$.598 per thousand lbs.... new plant, \$.455 per thousand lbs. Total savings, including savings in coal handling . . . exactly \$52,904 annually!

If you operate a steam plant, you can't afford to ignore these few down-to-earth facts!

COAL in most places is today's lowest-priced fuel. COAL resources in America are adequate for all needs—for hundreds of years to come.

COAL production in the U.S.A. is highly mechanized and by far the most efficient in the world.

COAL prices will therefore remain the most stable of

COAL is the safest fuel to store and use.

COAL is the fuel that industry counts on more and more—for with modern combustion and handling equipment, the inherent advantages of well-prepared coal net even bigger savings.

FOR HIGH EFFICIENCY FOR LOW COST

YOU CAN COUNT ON COAL!



It would be a nerve-jangling job for the human brain to cope with ever-changing elevator traffic demands 8 hours a day. And ordinary elevator control systems weren't designed to coordinate calls, cars and floors for really efficient service.

But Selectomatic's amazing "electrical brain" times elevators to the beat of your building's traffic flow. This revolutionary elevator control system goes into action at the setting of a switch . . . moves more people with fewer cars by "out-thinking" calls . . . then integrating these calls with cars and floors. The result is faster, more efficient elevator service that

puts cars where they're needed, when they're needed.

An integral part of all Selectomatic installations is the fabulous Westinghouse Synchro-Glide Landing Control. This exclusive development gives fast, accurate-leveling, feather-soft landings to add greater traffic-handling capacity to Selectomatic elevators.

So whether you're planning new construction or modernization, it will pay you to test-ride Selectomatic before you decide. Our local Westinghouse office can give you the names of Selectomatic installations in your locality. Or write Westinghouse Electric Corp., Elevator Division, Dept. D-1, Jersey City, N.J.

For years, Westinghouse engineering developments have stimulated the vertical transportation industry to strive for ever-higher standards of quality and efficiency. In every phase of vertical transportation—equipment, maintenance, and service—Westinghouse has been the vanguard for progress. So, whatever your traffic problems may be—there's a Westinghouse Integrated Vertical Transportation System to solve them completely. Look ahead with the leader . . .

YOU CAN BE SURE ... IF IT'S VEstinghouse LORGE

NIMM MUCLUS sets the style...

with floors of

MOSAIC CARLYLE QUARRY TILE!

Mosaic Carlyle Quarry Tile highlights the architectural and decorative appeal of Dallas' news-making Neiman-Marcus suburban store. The rich colors establish a casual atmosphere for friendly selling . . . blend happily with other interior decorations!

Specify Mosaic Carlyle Quarry Tile for homes or buildings you design or remodel. Use it indoors or out—for floors, entranceways, interiors, terraces and walkways.

For details, contact our nearest office. For helpful literature on other types of Mosaic Tile, write Department 30-8
The Mosaic Tile Company, Zanesville, Ohio.

photograph courtesy Neiman-Marcus

Branch Offices

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Salt Lake City 8, Utah 560 Gale Street Phone: 9-8285



Specifications: Mosaic Carlyle Quarry Tile floor in Navajo Red. Dewitt and Swank, Architects; A. J. Rife Construction Company, General Contractors; Ellis M. Skinner Tile Company, Tile Contractors—all of Dallas, Texas

photograph by Ulric Meisel

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San Francisco, California 245 Loomis Street Phone: Valencia 6-3924

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Offices, Showrooms and Warehouses Across the Nation Over 4000 Tile Contractors to serve you

PRODUCTS

(Continued from page 290)

Steel Rolling Doors With Lookout Windows

Narrow, transparent panes of heavyduty plastic inserted in one or more of the interlocking steel slats in *Kinnear* doors now afford extra benefit to installations where amplified interior light or clear vision through the door is desirable. The window slats placed near eye level permit those inside a building to see who is outside before opening the door, thus preventing access to the interior by unauthorized persons. The panels also permit daylight to penetrate the door area and illuminate potentially dangerous dark areas. The doors can be installed in old or new buildings and can be fabricated to any reasonable size, limited only by practical engineering and operating factors. They can also be equipped for operation manually, mechanically, or by motor, with remote



Plastic vision strip set into curtain door offers added safety for warehouses

control from any number of pushbutton stations. Kinnear Mfg. Co., Field Ave., Columbus, Ohio.

Air Conditioners and Dehumidifiers

Said to provide all the benefits of true air conditioning at a minimum cost, a 1/3 hp "Roomette" unit is a highlight



Compact, room-size unit provides draftfree air conditioning at low cost

of the 1952 line of Remington air conditioners. The unit is housed in a gray furniture steel cabinet with harmonizing, one-piece front louvers of Flemish oak. These are reported to provide "down flow," draft-free distribution of conditioned air while eliminating the need for adjustments.

Also featured in the new line are 1 and 1½ hp "Moisture Magnet" dehumidifiers, designed for commercial and industrial use and for handling moisture removal in areas too large for the ordinary household dehumidifier. The balance of the line includes the "Leader" 1 and 1½ hp air conditioners (readily converted to dehumidification), ½ and ¾ hp window models and 1 and 1½ hp console models. The "Leader" models are designed for installations where appearance is secondary to economy and efficiency. Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.

(Continued on page 298)



Medical Arts Building, Santa Monica, California. Exterior concrete painted with

Sure, there's a colorful flat paint for CONCRETE

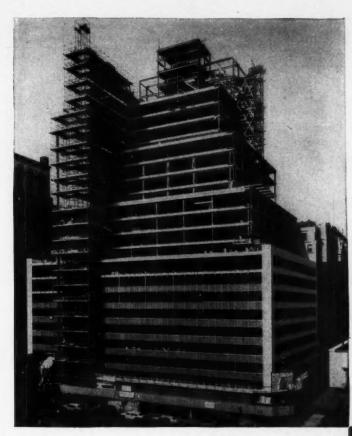
... There's a Specialized Wesco Paint for Every Stucco or Masonry Wall

For exterior concrete you want a paint that gives an absolutely uniform non-glaring finish without laps or streaks. You need a paint that's lime-proof and "breathes" moisture vapor without causing peeling or flaking. That's DURASITE, Wesco's specialized exterior resin paint for dense surfaces... for years the choice of many leading architects for its durability and unequalled color values.

No one paint can be right for all surfaces, but there's a Wesco Specialized Paint for every masonry surface—old or new, painted or unpainted, dense, porous or patched—that will give it beauty and protect it for years.



they saved steel with



Sylvan Bien Architect Weinberger & Weiahoff Structural Engineers Hegeman-Harris Co., Iuc. General Contractors 260 Madison Avenue Corp.

WITH FLOORS
AND FLOOR FILL

OF WAYLITE CONCRETE



The use of Waylite aggregate for the 500,000 square feet of floors and another 350,000 square feet of floor fill in 260 Madison Avenue Building, New York saved much dead weight. This in turn permitted economies in steel design.

Other advantages due to Waylite in this new structure that will house "the aristocracy of business" include better ceiling heights; and prevention of the transmission of sound. In other buildings, exposed Waylite masonry walls are sought because they need no acoustical treatment. Or because Waylite has important thermal insulation values.

Waylite's many advantages and its varied decorative treatments are discussed in an illustrated data book, which appears in Sweet's. Or ask for a copy by addressing The Waylite Co., 105 W. Madison St., Chicago 2, or Box 30, Bethlehem, Pa.

LIGHTWEIGHT AGGREGATE

PRODUCTS

(Continued from page 296)

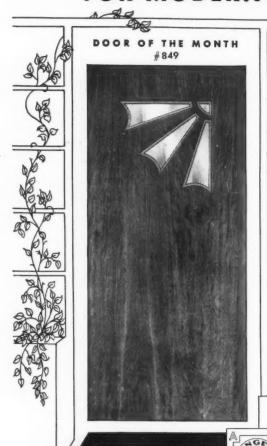
Compact Water Cooling Tower

A water cooling tower for use wherever intermediate capacities of cold water are required, the *Marley Double-Flow Aquatower* is reported to feature a lower height than any other cooling tower of similar capacity. It is also said to be the first cooling tower in the



NEW ANGEL Doors

FOR MODERN HOMES



48 Styles

ANGEL - DOORS

Here, at last, is an exterior, quality, flush door you can specify with confidence. 48 styles in two sizes, faced with beautifully grained, unselected birch or fir. Strong, sturdy, solid-core, flush doors, faced on both sides with 3-ply exterior grade plywood, bonded with water-resistant glue under high heat and tremendous pressure. Each Angel Door bears the Angel mark of quality and is priced to fit the individual pocketbook. Fully resistant to weather, water, warp and wear. Guaranteed by the makers who have been master woodworkers for over a quarter century. Angel Doors add value to any

ANGEL DOORS - SPECIFICATIONS

- 48 Exterior Flush Door Styles
- Two Sizes: 2'8" x 6'8" and 3'0" x 6'8" both by 1 34"
- Faced on both sides with exterior grade plywood, bonded under high heat and pressure.
- Raised moldings around glass on both sides
- Solid-core construction.
- Water resistant
- Shipped unfinished in individual dust-proof cartons
- Nationally advertised and available through Lumber Dealers everywhere.

ANGEL NOVELTY CO., Fitchburg, Mass.

Please send descriptive folder and free lithographed sheet showing 48 Angel Door Styles

Name

Company

Title

Street

City

Zone

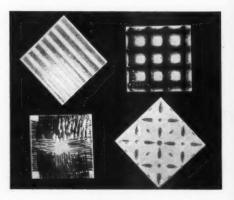
State

Medium-capacity water cooling tower features low height, compact design.

medium capacity range to employ the manufacturer's patented double-flow principle, in which one fan utilizes air from two completely open sides. The pumping head and required fan hp are said to be extremely low for any given capacity and design performance, and the design of the unit is said to simplify maintenance and inspection, since all parts are readily accessible. The tower is available in seven standard sizes, beginning with a 50-ton unit. It can be had either in all-steel or in wood with asbestos cement board casing. The Marley Co., Inc., 222 W. Gregory Blvd., Kansas City 5, Mo.

Clay Tile

Available in 34 stock patterns, a new clay tile has been developed called *Ceratile*. It is claimed that this decorative wall tile may even be used for

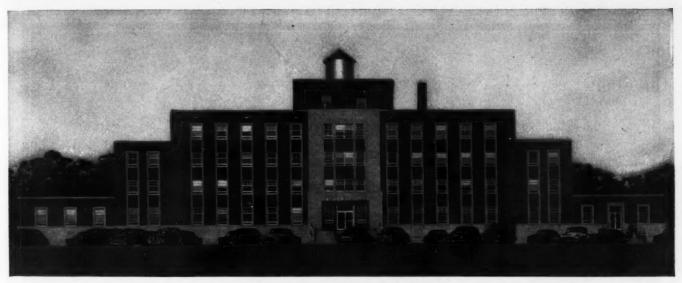


Typical examples of new line of decorative ceramic wall tile

exterior application in freezing climates, due to a unique frostproofing process. Each tile features distinctive color, design, pattern and texture. The Cambridge Tile Mfg. Co., P. O. Box 71, Cincinnati 15, Ohio.

CORRECTION

The RECORD regrets that in describing the *Streamline* steel rule manufactured by the Master Rule Mfg. Co., it reported on page 258 of the January, 1952 issue that the rule when locked could not slip "so much as $\frac{5}{8}$ in." The fraction of maximum slippage should have read 1/64 in.

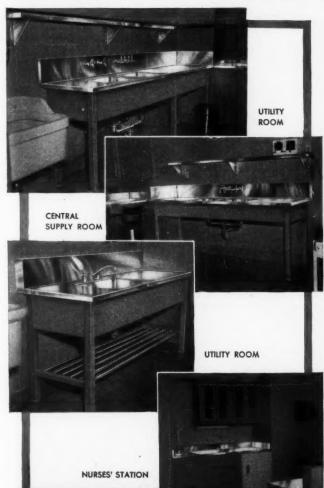


LOUISE OBICI MEMORIAL HOSPITAL, SUFFOLK, VIRGINIA
BASKERVILL & SON, ARCHITECTS VIRGINIA ENGINEERING CO. INC. GENERAL CONTRACTORS

America's Most Modern Equipment

installed in one of

America's Most Modern Hospitals



Whenever and wherever Sanitation and hygienic cleanliness are of utmost consideration, the first choice is

Just Line Stainless Steel Equipment

In the planning of the LOUISE OBICI MEMORIAL HOSPITAL in Suffolk, Virginia, no expense was spared to make this institution the last word in modern hospital efficiency.

Illustrated here are just a few JUST LINE Stainless Steel installations in this ultra modern institution dedicated to health.

JUST LINE Stainless Steel equipment is the recognized standard among leading hospital administrators, pathologists, architects and engineers. They recommend and specify JUST LINE Stainless Steel equipment because it gives the utmost in sanitation and dependable service.

Regardless of what your requirements may be send us your specifications. Our Engineers will furnish estimates without obligation.



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The Name HOPE'S

Guarantees



WINDOWS

Doxey & Layton Medical Center, Salt Lake City, Utah

Arthur Fahr, Architect

Excremely practical considerations influence the design of a modern Medical Center Building. This one contains office suite accommodations for 70 physicians, surgeons and dentists, plus a radiologist's laboratory, a pharmacy, an optical shop and a cafe, with an adjoining garage and garage-roof parking area for 125 cars. Hope's Windows aid the planning of such a building by their fitness to the widest variety in layout—and they

increase its value by their strong construction, reliable operation and economy in upkeep for the whole life of the structure.

The advantages of Hope's full daylight steel windows are especially apparent in creating a most desirable cheerfulness of surroundings in a doctor's office. Their positive weathertightness and control of ventilation are important to the comfort of the physician and his patients at all seasons in the year.

HOPE'S WINDOWS, INC., Jamestown, N.Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



Introduced just a few short months ago, Acousti-Celotex RANDOM PATTERN Perforated Tile has already captured the imagination of architects in every part of the country.

Acclaimed the most unusual, most beautiful Sound Conditioning material in 20 years, it offers exciting new decorative possibilities for interiors of every type! Smart, dramatic effects impossible with any other Sound Conditioning product!

But that isn't even the half of it. Like all Acousti-Celotex products, RANDOM PATTERN Perfor-

ated Tile has high sound-absorbing value. Two coats of tough finish, bonded under pressure of a hot knurling iron, give it a surface of superior washability. Can be washed repeatedly and painted repeatedly without impairing its sound-absorbing efficiency.

ASK YOUR DISTRIBUTOR to show you the new Acousti-Celotex RANDOM PATTERN Perforated Tile. If you don't know where to reach him, write to The Celotex Corporation, Dept. B-42, 120 S. LaSalle St., Chicago 3, Ill. In Canada, Dominion Sound Equipments, Ltd., Montreal, Quebec.



PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM
THE CELOTEX CORPORATION, 120 S. LA SALLE ST., CHICAGO 3, ILLINOIS

RD

NOW...DRAWING PENCILS OF

Absolute Uniformity

The New MICROTOMIC

Uniform within each degree . . . all leads of the same degree identical!

By a 94% affirmative vote a group of 488 Engineers, Architects, Purchasing Agents and Draftsmen say that testing 3 MICROTOMICs against 3 of various other makes—all of the same degree—is conclusive proof.

Note also: (I) the new Duck Gray color, chosen for eye-ease, (2) new 'Bull's-Eye' degree markings for instant identification, and (3) a new non-smudging quality of the exclusive Hi-Density Lead.

EBEKHAKU FABER SINCE 1849

Mail for FREE test pencils!

- EBERHARD FABER Pencil Co., Dept. AR-4
- 37 Greenpoint Avenue, Brooklyn 22, N.Y.
- I want to test MICROTOMIC uniformity vs. my present pencils. Send... degree MICROTOMICs please.
 - NAME_____
- FIRM
- STREET
- STREET
- CITY____
- . DEALER'S NAME

Architectural Engineering

LITERATURE

(Continued from page 224)

Hospital Hardware

Corbin Hardware for Hospitals (Catalog K73). Brochure gives complete description of all types of hardware suited to hospital use. Includes information on various types of locks and locksets, automatic exit fixtures and door closers, holders, stops, bumpers and pulls. Butt hinges, padlocks, lock switches, and locks for instrument, medical and narcotic cabinets are also described. Photographs point out features of each type of equipment, and suggested uses are given. 4 pp., illus. P. & F. Corbin Division, The American Hardware Corp., New Britain, Connecticut.*

Infra-Red Heater

Glomaster Infra-Red Recessed Wall Heater. Circular describes features and construction of the manufacturer's heating unit. 2 pp., illus. Glo-Ray Heater Co., Inc., Pomona, Calif.

Entrances and Store Fronts

(1) Extrud-A-Line Entrances (Catalog D-52); (2) Alumiline Store Front Construction (Catalog A-52). The first of these booklets describes the manufacturer's line of standard alumilited, extruded aluminum entrance units, standard adjustable-head transom units, standard and custom built wide stile entrances and adjustable-head stock frames for glass doors. All are fully illustrated with drawings, sections and photographs, and specifications are included.

The second pamphlet deals with various combining elements for store front construction. Separate pages of photographs and sections show many different kinds of sash, division bars, corner bars, reinforcements, sills, transom bars, facia, adaptors, glass and metal settings and awning hood facia. Store front construction details and standard construction shapes are also included. 8 pp., 12 pp., both illus. Alumiline Corp., 1540 Covert St., Brooklyn 27, N. Y.*

(Continued on page 306)

EBERHARD FABE

LSA. & MICROTOMIC

2H

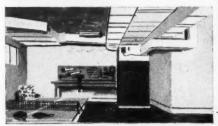
Architectural Service

Attractive Awnings



Rapidly increasing use of aluminum awnings is due to their advantages in all types of structures—institutional, commercial, industrial and residential. Besides providing desired shading, aluminum awnings reflect sun's heat—do not absorb and hold it against the building. Maintenance is never a problem with fireproof, rustproof, permanent aluminum...either in natural finish or one of the unlimited number of color combinations that are available. Fixed or roll type awnings made from Reynolds Aluminum are sold by many reliable manufacturers. We'll be pleased to send you their names.

Better Ductwork



A fast-moving trend to aluminum for heating, ventilating, and air conditioning ducts will soon make it the accepted material standard. Aluminum makes neater installations—an important factor in such places as game rooms. Rust problems are eliminated in laundry areas or wherever moisture is a consideration. Finished costs for aluminum ductwork are comparable to those with less permanent materials because lightweight aluminum is easier to handle, fabricate and install. For completely satisfied clients specify aluminum ductwork.

Modern Fire-Escapes



Rust will never stain the buildings you design when you specify fire escapes made of always attractive Reynolds Aluminum. Painting expense is eliminated for the building owner, too... especially important where corrosive industrial fumes are encountered. Savings made possible by the lighter structural load and easier erection frequently offset the small added material cost. A Reynolds architectural aluminum specialist will work with you on fire escape or any other aluminum design problem.

(Advertisement)



When planning your next design, stop and ask yourself what other metal offers the advantages that you find in aluminum. Unlimited design flexibility...widest range of finishes...light weight...great strength...rust and corrosion resistance. All these factors mean aluminum is the ideal material for your specifications.

Even though the supply of aluminum for building is limited now, the assistance of Reynolds Architectural Service is still yours for the asking. This service is an efficient and economical solution to your design problems. For complete information, call the Reynolds office listed under "Aluminum" in your classified telephone directory.



EXTRUDED SHAPES



TUBULAR PRODUCTS



FREE BOOKLET!

Send for your copy of Reynolds Architectural Folio today! A complete, up-to-date kit on architectural aluminum. In loose leaf form with drawings for direct tracing. Free when requested on business letterhead. Write to Reynolds Metals Company, 2572 South Third Street, Louisville 1, Ky.

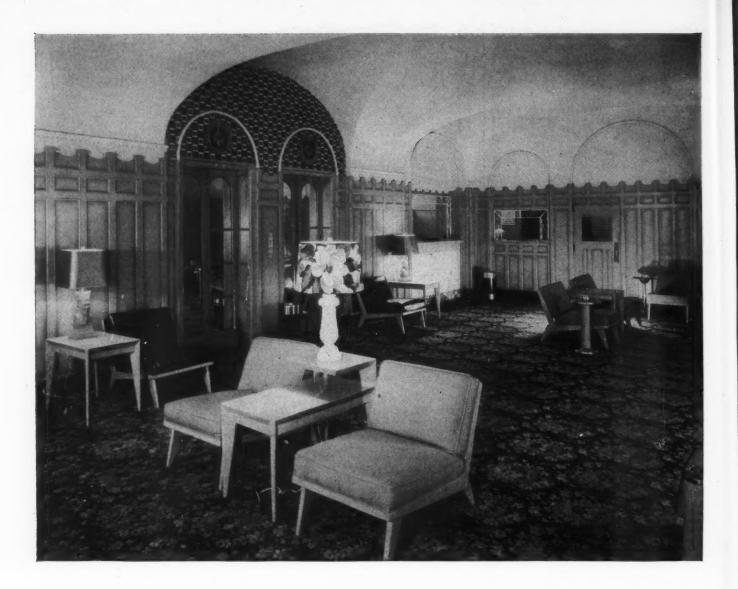




ORNAMENTAL CASTINGS produced to your specifications by independent foundries from Reynolds Aluminum ingot.



REYNOLDS ALUMINUM



BIGELOW puts roses at the feet of Royal Palm guests!



WHEN GUESTS step into the lobby of Detroit's Royal Palm Hotel they are welcomed by one of the world's most beautiful carpets. It's Bigelow's lovely Beauvais 1860.

And Mr. David Katz, manager of the Royal Palm will tell you, "Its beauty

is more than pile-deep"!

For this exquisite carpet combines luxury and style with the important functional properties of soundabsorption and sound-insulation. And its sturdy, resilient yarns have an extraordinary talent for wear and easy upkeep.

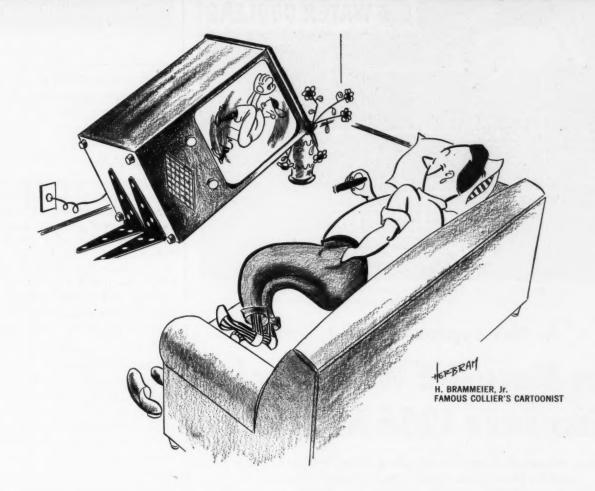
These are just some of the extra advantages you, and your clients, enjoy when you let Bigelow Carpet Council help you solve your floor-covering problems.

Contact this staff of experts today. They'll gladly advise you on patterns, colors, textures and prices.

No charge for this service. Just write to Bigelow Carpet Council, 140 Madison Avenue, New York, N.Y. Your inquiry will receive prompt attention.

BIGELOW Rugs and Carpets

Beauty you can see ... quality you can trust ... since 1825



"EUERYTHING HINGES ON HAGER!"



HAGER No. 1147
EXTRA HEAVY FRICTION-TYPE BUTT HINGE
Available also with "Hospital-Type" rounded top ends
to prevent attaching ropes, wires, etc.

ELIMINATE NOISY, SLAMMING DOORS!

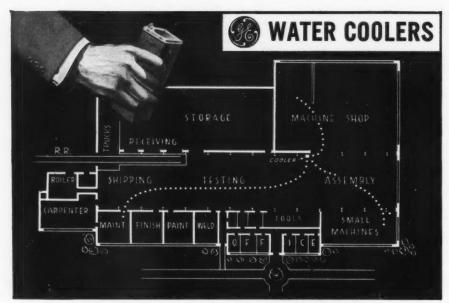
Exclusive flexible friction adjustor in the barrel of Hager Friction-Type Butts controls the friction exerted to just the desired degree. Proper adjustment of friction pressure prevents doors from slamming shut...holds them open to any desired ventilating position.

Removal of screw-type-plug at top end of butt provides quick access to the slotted pin. A few screw driver turns in one direction exert additional friction that retards the ease of door movement; several screw driver turns in the other direction eliminate friction . . . allow door to silently float back and forth.

Specify Hager Friction-Type Butts in hospitals or other buildings where quietness is either desirable or a necessity.

C. Hager & Sons Hinge Mfg. Co. • St. Louis, Mo. Founded 1849—Every Hager Hinge Swings on 100 Years of Experience





FLOOR PLAN where the 40 factory employees must walk an average of 110 feet to reach the one existing water cooler.

In this typical small plant—

One More G-E Water Cooler Can Save \$256 Annually

Now you can check your own drinking water facilities with the new G-E Work Center Plan for Water Cooler Placement

Long walks to drinking water can become surprisingly expensive when viewed in terms of all your employees over a full year. In the above example, the extra steps would cost more yearly than the installation of one additional General Electric Water Cooler.

See for yourself how much the purchase of one or more coolers for your business will cut wasted man-hours and increase employee productivity. Fill the coupon below for a free copy of the booklet, "G-E Work Center Plan for Water Cooler Placement.'



ANGLE - STREAM, NON-SQUIRT BUBBLER—Avoids water dripping back. Non-squirt nozzle.



ATTRACTIVE, MODERN STYLreen wrinkle finish. Fits anywhere.



EASY-ACCESS INTERIOR Front panel readily removed. Con trols accessible for adjustmen

You can put your confidence in—



FREE!	Illustrated booklet giving savings table	1
	Illustrated booklet giving savings table 5-step method, and typical floor plan.	

GENERAL ELECTRIC COMPANY, SECTION AR-5 AIR CONDITIONING DIVISION, BLOOMFIELD, NEW JERSEY

ZONE

Architectural Engineering

LITERATURE

(Continued from page 302)

Bronze Valves

Fairbanks Renewable Composition Disc Bronze Valves. Brochure describes features and construction of the manufacturer's group of renewable composition disc valves, illustrating the different valves which comprise the group. Specifications and standard sizes of valves are included along with a description of the discs available and a guide to their uses. 4 pp., illus. Fairbanks Co., 393 Lafayette St., New York 3. N. Y.

Signal Equipment

Hospital & Commercial Signal Equipment (Bulletin No. HSE1-51). Including information useful in the design of hospitals and commercial buildings, this new booklet contains technical data on all types of call systems. Descriptions are given of nurses' call systems, bedside calling stations, annunciators, lights and paging systems. Two pages are devoted to general information on all available types, including detailed mounting information. Booklet contains many diagrams - of schematic wiring, dimensions for installation requirements, fanning strips, in-and-out registers and remote control registers. 32 pp., illus. Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Cal.

Windows for Mental Hospitals

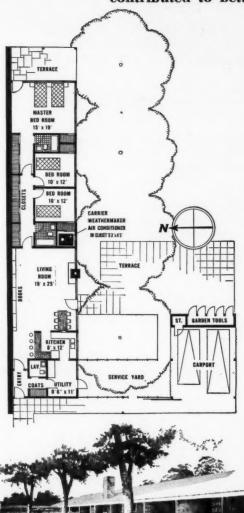
The Bayley Saf-T-Gard Window. Brochure gives complete information on recently developed institutional window. Booklet lists features and gives installation sequence. Photographs show complete window and all of the sections, including vents, guards, frame and screen. Dimensions are also given for full size sections, illustrated by detailed drawings. Typical layouts and all available sizes are contained and a section of the booklet is devoted to the "Glaz-Wedg" method - a glazine method of securing the glass. Both short and detailed specifications are included in the brochure. 12 pp., illus. The William Bayley Co., 1200 Warder St., Springfield 99, Ohio.*

(Continued on page 310)

This house should give you ideas

This is a Carrier Weathermaker Home created by Roy Carroll.

It shows you a number of ways in which Carrier Weathermaker Air Conditioning contributed to better house design.





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The architects — Carroll, Grisdale & Van Alen is a well-known Philadelphia firm whose recent work includes the Youth Study Center on Benjamin Franklin Parkway and the Terminal Building, Philadelphia International Airport (now in progress).

The Carrier Weathermaker

is designed for a duct system like that used for forced warm air heating. The Weathermaker cools and heats. It burns gas for heating... uses a sealed electric refrigerating unit for cooling. It is only a little larger than an ordinary furnace.

It influenced the design

This Weathermaker Home contains more usable space per building dollar. That's possible because it makes functional use of its air conditioning. Because the new Weathermaker is specially designed for homes, it insures that the air you live in is healthful and comfortable, so the rooms have only one exposure. Only a few movable sash are required. The floor is a simple rectangle. Baths are placed in the interior.

It helped pay for itself

This Weathermaker Home makes air conditioning economical. The design makes the house less expensive to build. The design reduces the first cost of the air conditioning. An overhang over the south windows . . . trees shading the roof . . . help to reduce the cost of summer cooling. A solid wall to the north helps reduce the cost of winter heating.

It made a better home

This Weathermaker Home is a more convenient home. A windowless wall gains space for storage. Windows, doors and closets are placed to allow the greatest freedom in furniture arrangement. The living and dining areas are completely open and interlacing, while the sleeping areas are completely private. And, of course, the Weathermaker keeps the house far cleaner, far more quiet, and infinitely more comfortable. Of course, this is just one approach. There are many more. How would you do it?



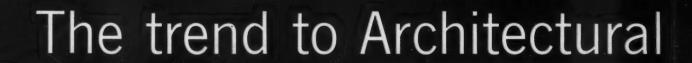
AIR CONDITIONING • REFRIGERATION

For 50 years—the people who know air conditioning best

CARRIER CORPORATION
312 South Geddes Street, Syracuse, N. Y.

Please send me the story on the Weathermaker Air Conditioner and the Weathermaker Home.

Name	
Street	
Cian	Santa



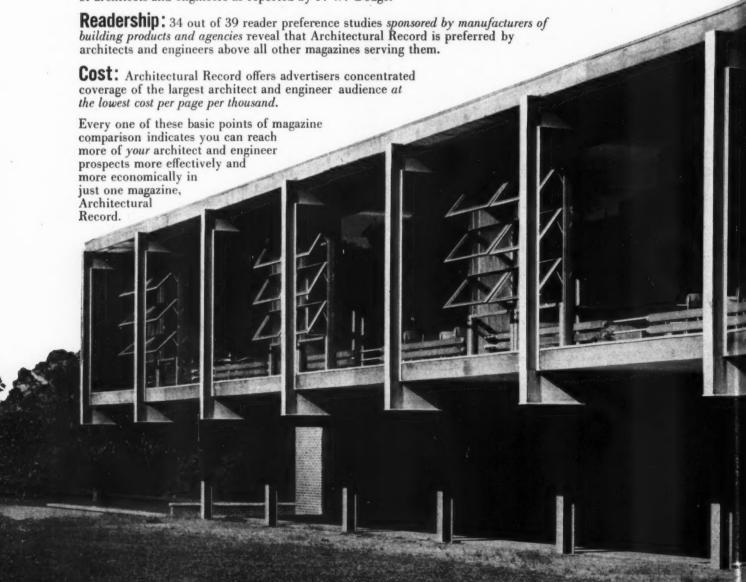
In 1951 Architectural Record published the largest volume of building product advertising carried by any architectural magazine in the past 25 years.

Now in 1952...the trend to Architectural Record continues with a 19.8% gain in advertising pages in January compared with a year ago—an impressive testimonial by building product manufacturers and their agencies to the proven advertising effectiveness of Architectural Record.

Four basic points of magazine comparison explain why year after year—and in 1952 more than ever before—Architectural Record is the first choice of building product advertisers in the architectural field . . .

Circulation: More architects and engineers subscribe to Architectural Record than to any other technical magazine. And these architects and engineers design—and specify the products that go into—83% of the total dollar volume of all architect-designed building reported by F. W. Dodge Corporation.

Editorial Balance: Architectural Record is the only magazine edited specifically for architects and engineers. Editorial content covers the *full range* of architect and engineer design interest and at the same time is *scientifically balanced in terms of planning activity*. Relative editorial emphasis on non-residential buildings, apartments, hotels and houses is kept in steady balance with the rate of flow of these kinds of projects to the drawing boards of architects and engineers as reported by F. W. Dodge.



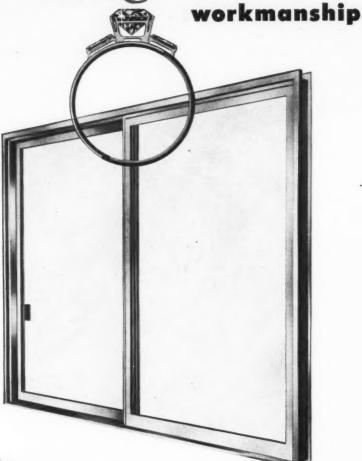
Record continues in 1952

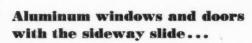
Maryville Fine Arts Building, Maryville, Tenn., first presented to architects and engineers in Architectural Record.

Architects: SCHWEIKHER & ELTING Photographer: JOSEPH W. MOLITOR



Attimation in fine





Because ... CLIDE horizontal-sliding windows and doors are unmatched in quality of design, construction, operation and beauty. Provide the architect with utmost flexibility and freedom in design... precision-built of satin-finished, corrosion-resistant tempered aluminum alloy... available for single, Thermopane and Twindow glazing... harmonize with any architecture... come equipped with hardware, and completely weather-stripped with resilient stainless steel... installation, glazing, washing all done from the inside.

In specifying GLIDE units...institutional, commercial, or residential...you assure your clients the best...bar none! Nationally distributed.

IN SWEET'S ... 17a

Write us for additional information.

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SOME GLIDE HOSPITAL INSTALLATIONS: Red Cross Blood Bank, L.A. [Austin, Field & Fry, A.I.A.] Anderson Hosp., Houston [MacKie & Kamrath, A.I.A.] • Pioneers Mem. Hosp., Brawley, Calif. [Walker, Kalionzes & Klingerman, A.I.A.] • UCLA Med. Center, L.A. [Wurdeman & Becket, A.I.A.]

Architectural Engineering

LITERATURE

(Continued from page 306)

Hollow Metal Doors

Hollow Metal Doors, Jambs and Trim. Catalog of the manufacturer's various types of hollow doors and related products illustrates the line with photographs and section drawings of construction features. Included are integral trim door frame profiles, door designs and standard types, standard construction details, underwriters data, underwriters label doors, and saddle and weathering conditions. Details and specifications are included. 12 pp., illus. Aetna Steel Products Corp., 730 Fifth Ave., New York 19, N. Y.*

Porcelain Enamel

Erie Architectural Porcelain Enamel. Brochure contains information on basic characteristics, including color, texture, versatility, etc. The "Complete Job Service" to architects is explained, covering field service, engineering, delivery, erection and written guarantee. Photographs illustrate installations in actual use and technical drawings show typical details, including steel sash detail, coping, canopy, head, sill, bulkhead and wall sections. 8 pp., illus. The Erie Enameling Co., Architectural Division, Erie, Pa.*

Steel Base Concrete Roofs

(1) Corruform and Tufcor; (2) Cofar. Brochures deal with corrugated lightweight steel deck designed to be used as base for concrete floor and roof slabs. Features of the products, together with tables of physical properties and design loads and deflections are included. Photographs and drawings illustrate construction procedures and finished installations. Each 4 pp., illus. Granco Steel Products Co., Granite City, Ill.*

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

James H. Benton, Architect. % B. O. Vannort, Engineers, 700 So. College St., Charlotte, N. C.

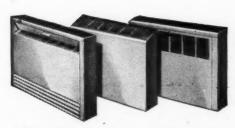
Norbert J. Schaaf, 264 Hopkins St., Michigan City, Ind.

Oregon hospital chooses MODINE

The new Sacred Heart Hospital at Eugene, Oregon, safeguards patients' health and comfort with Modine Convectors in every room. Architect: John W. Maloney. Engineers: Lezin & Notkin. General Contractor: Ross B. Hammon. Mechanical Contractor: Percy S. Lord.



America's finest buildings use America's finest convectors



Choose from three enclosure types in Standard and heavyduty Institutional models for free-standing, recessed or wall-hung installation WHEN top architects and heating engineers want the finest in modern heating, they specify Modine Convector Radiation. These beautfully styled convectors have met every test for uniform, healthful heating...for long-life, economical service. Ask your Modine representative for full information. He's listed in your telephone book classified section. Modine Mfg. Co., 1510 DeKoven Ave., Racine, Wis.

Modine convectors

R-1140



MATERNITY HOSPITAL

HAVANA, CUBA

"Motherhood" statue is approximately 18' 6" tall, It was executed in terra cotta by Federal Seaboard from a 1" scale model designed by a prominent Cuban sculptor. Columns, inscription and trim are of Endord-Ashlar Architectural Terra Cotta in a pink buff multichrome matte finish.

Listed below are an even dozen of the many modern hospitals in which Federal Seaboard Architectural Terra Cotta is providing interiors or exteriors of lasting beauty:

St. Elizabeth's Hospital, Washington, D. C. U.S. Veterans Administration Hospital at Canandaigua, N. Y.

U.S. Veterans Administration Hospital, Coatesville, Pa. U.S. Veterans Administration Hospital, Erie, Pa.

Perth Amboy General Hospital, Perth Amboy, N. J.

Roosevelt Hospital, Middlesex Co., N. J. Tuberculosis Hospital at Rio Pedras, P. R.

U. S. Naval Medical Center, Bethesda, Md.

U. S. Veterans Administration Hospital, Lyons, N. J.

U. S. Veterans Administration Hospital, Waco, Texas

Elizabeth General Hospital, Elizabeth, N. J.

U. S. Veterans Administration Hospital, Fort Hamilton, Brooklyn, N. Y.



VETERANS HOSPITAL, ALTOONA, PA.

Marlier, Wolfe & Johnstone—Architects
Mellon-Stuart Co.—Builders

In light shades of trim to harmonize with the building's brick facing, in black bands to give maximum contrast where needed, Enduro-Ashlar Architectural Terra Cotta was specified for this recently completed VA hospital.

Plain surfaces or decorative sculpture, ENDURO-ASHLAR Architectural Terra Cotta is specified more and more for modern hospitals!

Here is the versatile building material—not classified as critical and consequently in ample supply—that meets all your design requirements. Enduro-Ashlar Architectural Terra Cotta possesses exceptional plasticity of form, color and texture. In units large or small, it can be custom-made in an unlimited range of ceramic colors—brilliant hues or delicate tints—for interiors or exteriors, plain surfaces or decorative sculpture. What's more, the richness and beauty of this time-proved building material can be retained indefinitely by simple soap-and-water washings. For hospitals, schools, large scale housing and industrial construction, Enduro-Ashlar Architectural Terra Cotta is written more and more into architects' specifications. It is always made to meet their requirements perfectly. Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge. Send your inquiry today.

FEDERAL SEABOARD TERRA COTTA



CORPORATION

10 EAST 40th STREET, NEW YORK 16, N. Y.

Plants at Perth Amboy and South Amboy, N. J.

African Mahogany Weldwood Fire Doors used in the offices of Beatty & Oliver, Inc., 37



Visitors feel right at home when greeted by the soft, friendly beauty of Weldwood Fire Doors.

But these doors also present a tough, keep out attitude where fire and heat are concerned.

With Weldwood Fire Doors on the job, no fire can spread should it break out in any office.

And if fire should invade from elsewhere, the Weldwood Fire Doors, with their remarkable mineral core, stand ready to give the kind of protection that earned them the hardto-get Underwriters' Label.

So be sure your buildings have this protection.

Also, remember the Weldwood Stay-Strate Door where a labeled door is not necessary, but where fire resistance is a desired advantage.

The Weldwood Stay-Strate Door is available in the same wide range of beautiful hardwood faces as the Weldwood Fire Door . . . and offers the same advantages except that the edge banding is not fireproofed.

Like the Weldwood Fire Door, it has striking beauty...unusually light weight . . . exceptional stability . . extraordinary durability ... and is proof against rot, vermin and decay.

Send for complete information about both of these Weldwood Flush Doors today.

WELDWOOD FIRE DOOR SPECIFICATIONS

Face Veneers - Face veneers are thoroughly kiln-dried hardwood of standard thickness — 1/28" — and smoothly belt-sanded. Rotary-cut unselected birch is standard; other sliced or rotary-cut domestic or foreign woods are available.

-The core is made of incombustible Kaylo* composition, having a normal density of 20 pounds per cubic foot. The core sections are joined together with tongue-and-groove joints, as approved by the Underwriters' Laboratories. The core is smoothly sanded prior to application of crossbands and face

Banding — The edge banding is of birch, treated with Class "A" fire-proofing agent. The top banding is \\ 2" in thickness; the side banding and the bottom banding is 11/2 in thickness, made by laminating two ¾" pieces.

Crossbands — Crossbands are thoroughly kiln-dried hardwood, 1/16" thick, extending the full width of

Adhesives--The core and edge banding are bonded together with a waterproof resin glue. The entire core is sized on two sides to insure per-fect glue bond between core and crossband. The core, crossband and face veneer are bonded with water-proof Tego film phenolic glue by the hot plate process.

Sizes-The thickness of all fire doors is 1%". Available in range of standard sizes up to and including 4' by 7'.

Vision Panel—If required, a vision panel frame for a 10" x 10" light (only size available) shall be provided carton-packed and complete with screws. A baked finish of light brown metal paint is provided on all surfaces. Glazing with 1/4" wire glass shall be done by others.

*T. M. Reg. Owens-Illinois Glass Co.



United States Plywood Corporation carries WELDWOOD® FLUSH DOORS the most complete line of flush doors on the market including the famous Weldwood Fire Manufactured and distributed by Doors, Weldwood Stay-Strate Doors, Weldwood Honeycomb Doors, Mengel Hollow-core

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foreign and domestic face veneers.

APRIL 1952

Doors, Mengel and Algoma Lumber Core Doors, 1%" and 1%" with a variety of both

Another Globe Elevator!

America's Most

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to Install, Operate
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HOTELS

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WAREHOUSES

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This roomy Globe Elevator, recently installed in St. Margaret's Mercy Hospital, Fredonia, Kansas, was selected for its quiet, dependable operation and economical installation.

Compare a Globe OiLIFT Elevator with a cable-type installation, and you will be surprised at the economies offered by Globe.

The Globe's ascent is powered by an oil operated cylinder. Descent is by gravity. The Globe OiLIFT Principle eliminates expensive penthouse construction and elaborate mechanisms. The result is a very appreciable saving in first cost and operation.

Globe's maintenance cost is so low, as compared with that of cable-types, that over a period of 20 years, the owner will more than save the original cost of his elevator.

Globe elevators are custom-assembled to meet your specifications. Write today for our informative Bulletin AR-309 on passenger and freight elevators. It belongs in your files.



GLOBE



BY THE WORLD'S LARGEST MAKERS OF HYDRAULIC LIFTS, ELEVATORS AND AUTOMOTIVE HOISTS

GLOBE HOIST COMPANY, 1000 E. Mermaid Lane, Philadelphia 18, Pa. (Factories at Des Moines, Iowa & Philadelphia, Pa.)

THE RECORD REPORTS

WASHINGTON

(Continued from page 38)

the Operation Trade Secrets banner. Then these were climaxed with a recent Washington, D. C., pow-wow to which members of Congress and the press were invited.

At this meeting in the Capital, more than a score of architects and home builders discussed their new methods for making home better and less expensive.

"Trade Secrets" Review

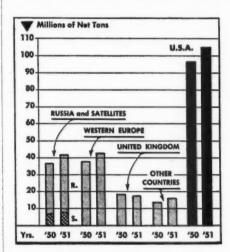
Here are some of the "trade secrets" revealed:

Herman York, Jamaica, N. Y., architect: His firm, he said, is using every known device to bring costs down. These include multiple space use and compartmentalized bathrooms. Floor space must be used to maximum advantage and the "open plan" is one of the firm's most useful devices.

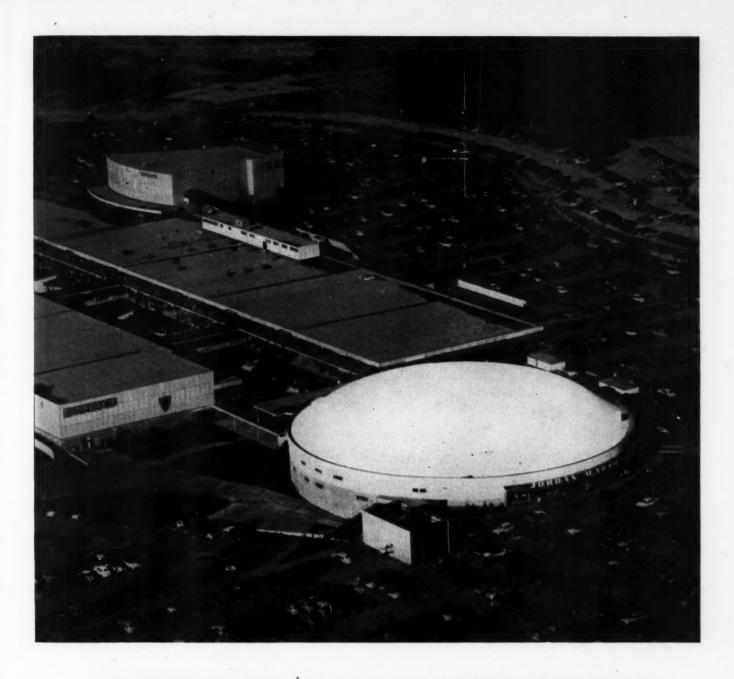
The York houses combine activities in a single room — living-dining, garage-playroom, study-sleeping, etc.

If plenty of storage space is provided elsewhere, basements are unnecessary, Mr. York declared. "Basements," he said. "are too big anyway."

John Highland Jr., Buffalo, N. Y., architect: We must stay away from the concept of designing down to the mini(Continued on page 318)



Significant rise in world steel production is shown in graph. Production has risen in most countries since 1950. The U.S. increase, 8.3 million tons, was by far the largest tonnage gain of any nation



SHOPPERS' WORLD HAS LARGEST ARCHED-BEAM DOME

This picture shows part of Shoppers' World, Framingham, Mass., which caters to the shopping needs of more than 125,000 families in the Boston-Framingham-Worcester area. The 70-acre project has parking facilities for 6000 automobiles, and a 50-store, two-tiered shopping area in the shape of a "U". The base of the "U" is a 227-ft-wide, 54-ft-high dome, containing 36 fabricated beam-arches weighing 475 tons.

This structure, with its 40,845 sq ft of floor space, is the largest dome of arched-beam construction ever erected. Used in constructing Shoppers' World were some 1200 tons of Bethlehem Structural Shapes, and 670 tons of Bethlehem Open-Web Steel Joists.



Owners: Suburban Centers Trust, Boston; Architects: Ketchum, Gina and Sharp, New York; Structural Engineers: Severud, Elstad & Krueger, New York; General Contractor: George B. H. Macomber Co., Boston; Steel Fabricator and Erector: A. O. Wilson Structural Co., Cambridge, Mass.

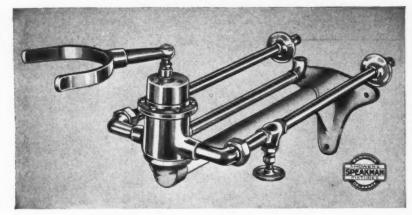
2 NEW SPEAKMAN

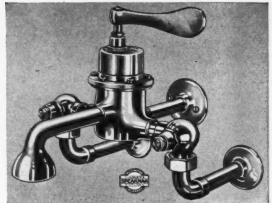
Elbow and Knee Operated

SENTINEL MIXING VALVES

5-6175 - Speakman Sentinel Knee-action Mixing Valve. Size 1/2". Center to center of inlets, 8 inches

5-6065 — Speakman Sentinel Elbow-action Mixing Valve Size ½". Center to center of inlets, 8 inches





Permit washing in water of a predetermined temperature that does not change due to "Water Stealing" or fluctuating water supply line pressures

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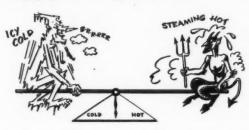
Or any other installation where it is desirable to maintain the discharge temperature with a high degree of sanitation.

Speakman Sentinel (Patented) Mixing Valves guard you against sudden changes of steaming hot or icy cold water caused by fluctuating supply line pressures. These elbow and knee operated fixtures will maintain the discharge temperature set by the user. It's all done with the F-L-O-A-T-I-N-G SENTINEL, a triumph of engineering that holds discharge temperatures steady.

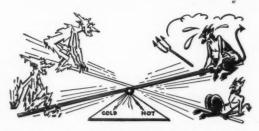
There are no tricky, temperamental springs and thermostats or other gadgets that might break down or are difficult to replace or repair. It works automatically. It works on water pressure alone.

The Floating Sentinel is easily accessible and can be quickly removed, if necessary, for inspection or cleaning without shutting off the water supply.

For further information send for folder S-56



With the SENTINEL BALANCED PRESSURE VALVE, discharge temperatures remain steady!



Without the Sentinel, unbalanced pressures from "water stealing" result in sudden surges of icy cold or steaming hot water.



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SHOWERS AND FIXTURES

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Ludowici shale tiles make the finest roof you can buy and they are always economical



In excellent taste and with assurance of quiet harmony in landscaped surroundings, a roof of this characteristic tile will protect your house with lifelong service—It is weatherproof, fireproof and as imperishable as the earth itself.



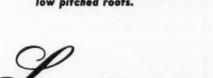
This Ludowici interlocking tile with the authentic texture of the typical wood "shake" has no equal in permanency... no peer in beauty. For modern or traditional architecture this design is a symbol of elegance.



The idiom of modern architecture is functionalism. This Ludowici tile stone is a perfect complement to this idea. It makes a permanent, colorful design of proper texture for low pitched roofs.



All Ludowici roof tiles are of hard burned shale, colorful and harmonious with any style of architecture and have a protective permanence which can only be measured in the distance of time. With original cost surprisingly less than you think, a tile roof is an obvious economy; an investment with certain return from low insurance and maintenance. Send coupon for your copy of our newly published booklet about Ludowici Tile roofs.



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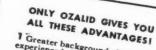
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THE RECORD REPORTS

WASHINGTON

(Continued from page 314)

mum, must design the best home for the money — and this means rising above the absolute minimum in plan-

The future home will be built principally of stock parts, with a certain trend in that direction already visible.

Needed: a broader educational program on financing.

Martin J. Bartling Jr., Knoxville, Tenn., builder: His new concrete slab design has eliminated much reinforcing steel. Use of concrete blocks with smoother surfaces eliminates need for exterior finish — the blocks have lateral joining grooves which provide channels for electric wiring, saving up to 200 line ft of No. 12 wire per house.

For the most part, wiring in Bartling houses runs horizontal rather than ver-

Trussed roofs save lumber.

Special purpose storage applications save lumber, nails, brass, steel. No hardware is required.

Andrew Place, South Bend, Ind., builder: "We redesigned our houses to get the cost down." He uses a central plumbing stack, demonstrated at the Washington confab, tying all plumbing

He startled his hearers with the information that Place houses offer Thermoplane glazing all around at a unit price of \$11,400 for four-bedroom, 1120sq-ft houses.

When the materials bite came, he switched from aluminum sash to wood frame with thermopane - saving hard-

Other conservation measures: perimeter heating, glazed sewer pipe, prefabricated chimneys, awning type win-

R. G. Hughes, Pampa, Tex., builder: New house every six weeks is designed by research panel in his own organiza-

Houses should be (1) expandable; (2) air conditioned. He predicts air conditioning in all houses in the Southwest within five years.

Ned Cole, Austin, Tex., builder: Storage walls are a principle, both for storage and as a labor- and time-saving device. Mr. Cole erects the house shell, then moves in a special storage wall crew that

(Continued on page 322)



PARKLABREA

Los Angeles Housing Project
KOHLER PLUMBING FIXTURES



Architects: Leonard Schultz & Associates, New York; Associate Architects: Kaufman & Stanton, Los Angeles; Kohler fixtures supplied by Keenan Pipe & Supply Company, Los Angeles and Grinnell Company of the Pacific, Los Angeles; installed by Mehring and Hanson Company, Los Angeles.

Parklabrea, in Los Angeles, is one of seven huge Metropolitan Life housing developments in which Kohler plumbing fixtures and fittings are used. The others are Parkchester, Stuyvesant Town, Peter Cooper Village and Riverton, in New York; Parkfairfax at Alexandria, Virginia; and Parkmerced in San Francisco.

In these seven projects, more than 142,000 Kohler fixtures were installed, with Kohler fittings of chromium plated brass.

One of the world's largest, Parklabrea occupies a 176-acre site, consists of 40 blocks of 2-story apartment structures, and eighteen 13-story buildings of 153 apartments each—a total of 4,253 dwelling units.

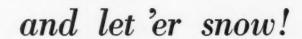
Kohler fixtures include Cosmopolitan Bench Baths; Chesapeake vitreous china ledge lavatories on legs, with mixer fittings; Delton enameled iron wall-hanging shelf lavatories, with mixer fittings; Wellworth close-coupled closets; Branham urinals; Daybrook drinking fountains.

Kohler Co., Kohler, Wisconsin. Established 1873

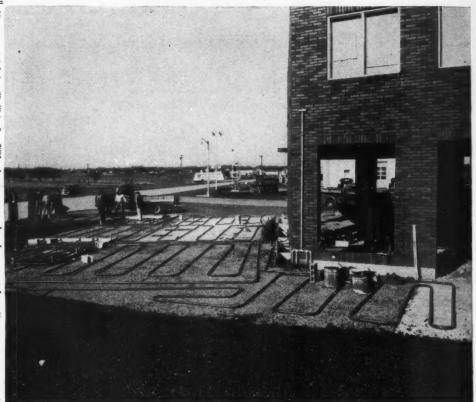
KOHLER OF KOHLER

PLUMBING FIXTURES . HEATING EQUIPMENT . ELECTRIC PLANTS . AIR-COOLED ENGINES . PRECISION CONTROLS

Man the pumps







Service stations with steel pipe snow melting get the business

It takes a constant flow of cars at the gas pumps to keep a modern service station operating profitably, for traffic and sales go handin-hand. Anything that interferes with the station's capacity to fill 'em up and keep 'em moving, naturally reduces the profit.

Sudden and heavy snow falls that slow down normal operations, sometimes for days at a time, not only result in disgruntled customers but, perhaps, in permanent loss of business as well. It need not be so! Foresighted operators of service stations with steel pipe snow melting systems do "business as usual" . . . while competitors shovel!

The known economy of steel pipe makes investment in a snow melting system practical for service stations, just as it does for super-markets, decentralized shopping areas and any business dependent upon automobile patronage. And in service, steel pipe has a performance record proved in more than 60 years of conventional hot water and steam heating applications. Add to this the advantages of formability and weldability for coil fabrication and you know why steel pipe is first choice for snow melting systems, too, and why it is the most widely used pipe in the world.

Steel Pipe is <u>First Choice</u>

COMMITTEE ON STEEL PIPE RESEARCH

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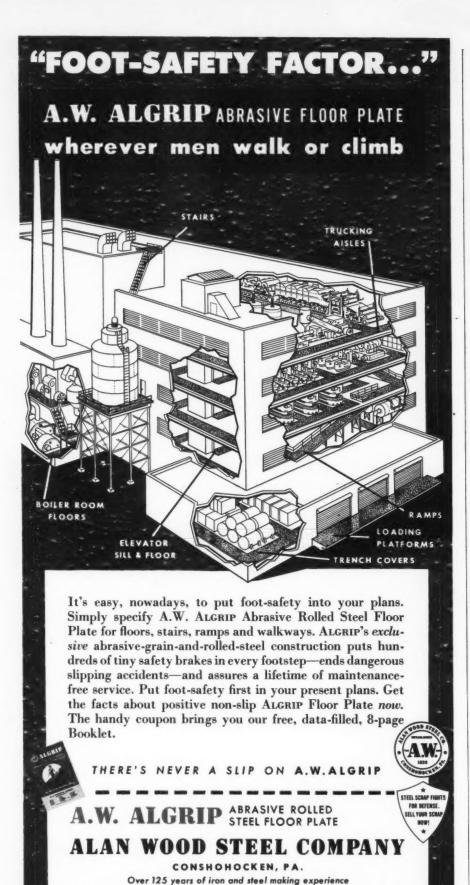
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THE RECORD REPORTS

WASHINGTON

(Continued from page 318)

installs the partitions in one day. It takes two more days to finish the unit completely.

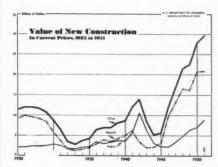
"We've got to improve our product and make it more competitive to force other builders to do a better job," Mr. Cole contends. Only in this way will better builders reduce the number of complaints about veterans' shoddy housing reaching the ears of Congress.

Fritz Burns, Denver, Colo., builder: Builders should get better acquainted with their bankers and other lenders. They should strive to familiarize the bankers with the builders' special problems. A cash flow chart, depicting a step-by-step movement of loan funds, where the money will go and how it will come back to the lender, helps inspire confidence.

Frank Collins, Chester, Pa., builder: Precut lumber yields marked savings: \$23 per unit for yard-cut lumber compared with \$95 for site cutting. Built-in bookcases, vanities and other furniture are drawing features.

Fred P. Meagher, Upper Darby, Pa., builder: New twist—save costs by subbing out all work. "We build a pilot house, then take prices. By building one unit ourselves, we know the cost and can take bids intelligently. We hire equipment. This way there is no need for a big office staff." Mr. Meagher puts

(Continued on page 326)



National Production Authority's Industry Report presents this graph showing comparative value of new construction, 1925 to 1951, in billions of dollars. Figures are supplied by the Building Materials Division of U. S. Department of Commerce

Company_



Unsightly beams, pipes, sprinklers, air ducts, etc.





Clean, finished smartly styled Neo-Ray Louvred Ceiling

AFTER

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Yes . . . when specifications call for Neo-Ray ML Louvred Ceilings, you're getting extras right down the line: exclusive mating-slots and tracks that assure *perfect alignment* . . . labor-saving hangers and tracks that mean simple, low cost installation . . . stock sections that can be cut on the job to meet

any requirements. Remember — when specifying louvred ceilings get the "extras"...specify Neo-Ray.

See our catalog in Sweet's Architectural File for 1952 sec. 31a NE

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modern hospitals everywhere

choose G-J **Door Devices**





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THE RECORD REPORTS

up about four houses a day using this method.

Albert Balch, Seattle, Wash., builder and architect: More progress has been made in house design during the last year than ever before. Many new ideas are flowing out of architects' offices.

He urged a new product for every builder for 1952. Think and plan and engineer before beginning construction, he advised. WASHINGTON (Cont. from p. 322)

Furnish separate plans for each sub-contractor.

The cheapest item in any house is its plan drawn by a good architect.

New Houses for One of Seven

Opening the Washington session last month, Alan E. Brockbank, Salt Lake City builder who is the recently elected N.A.H.B. president, reminded the members of Congress and government officials attending that one out of seven families in the U. S. have moved into new houses since the end of World War II; houses built by an industry that grossed over \$12 billion in one year.

He also pointed out that 1092 builders construct 70 per cent of all housing; 22,430 erect 83 per cent.

Mr. Brockbank had some terse comments about progress in the house building field.

Most people agree, he said, that we are still building Model T units — just learning how to enter the mass market. As we get incomparably better clothes, tools, entertainment, transportation, so builders are looking for ways to improve their product — together with cost-cutting techniques.

"Super-Duper Priority": CMP Structure Pyramids

The military have been given some new symbols, and the Select Committee on Small Business of the House of Representatives is crying "Pyramid!"

"S" and "S-1" on military orders now give priority over other military orders which already had priority over regular CMP orders.

The Committee asserted the Controlled Materials Plan is moving farther and farther from its original concepts.

A subcommittee of the House unit has been continuing its investigation of problems of small business under CMP. Officials of both Defense Production Administration and National Production Authority have been heard on operations of the program during the fourth quarter of last year, the current status of CMP in the first quarter of this year and prospects for second quarter.

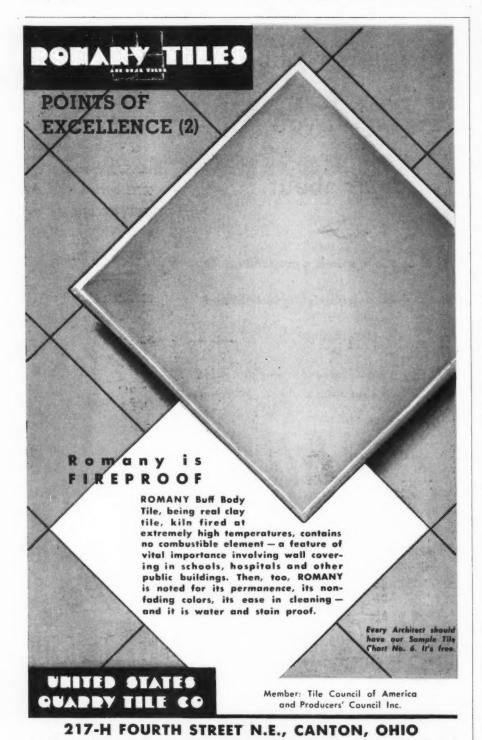
Congress Welcomes Easing

Congress looked with obvious approval on the NPA decision to let 645 non-industrial commercial-type projects go forward, starting with the third quarter of 1952. It was mentioned in the staff committee report of the House Small Business Group.

NPA had also decided to permit self-certification of five instead of two tons of steel for the commercial projects. Two of the five tons now self-certified can be structural steel, except for wide-flange beams. This item was excepted because it remained in extremely tight supply. The additional amounts for self-certification applied only to commercial construction, not to industrial building.

DPA also saw the light with regard to steel sheets and modified its orders so

(Continued on page 330)



When Time Counts-Count On CONNORS— Reliable Service

Over the years CONNORS has built a well-earned reputation for dependability in the industry.

So if quality steel merchant bars are a component of your product, you can count on CONNORS for the reliable service your production schedules need and deserve.

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Contential most beautiful GARAGE DOOR

The new Riviera is the most brilliant and versatile door
design created in our 21 years of door specialization.

rambling modern house and quietly dignified on a formal colonial.

It creates the effect of having been custom-built for any house you put it in but the price-tag says otherwise.

CRAWFORD DOOR COMPANY

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EXCLUSIVE NEW MAGI-COTE PROTECTIVE TREATMENT

Every Crawford door is protected by the new Magi-Cote Process—a three minute immersion in clear Magi-Cote liquid which seals all wood surfaces against moisture, termites, fungi, dry-rot, etc. exclusive in Crawford-built doors (east of the Rockies).



AROUND SPECIFICATIONS





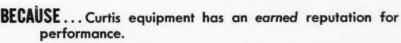
Evaporative condensers cooling towers — and air handling units to match



Central Type-10-15 Ton Air Conditioning



2, 4, 6, 8 Ton-**Packaged Type** Air Conditioning



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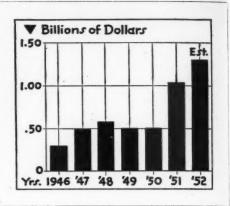
WASHINGTON

(Continued from page 326)

One graphic illustration of why easing of steel supply is already apparent. Table and graph show the outlay for new equipment and construction by the steel industry for each year since 1946

YEAR	DOLLAR EXPENDITURES
1952	*\$1,300,000,000
1951	1,041,000,000
1950	513,000,000
1949	510,000,000
1948	583,000,000
1947	496,000,000
1946	291,000,000

*Advance Estimate



CONSTRUCTION STORY



rest of the structure.

A PERMANENT facing material of lasting beauty, Seaporcel blends strikingly with any background, whether brick, stone, aluminum or wood.

IN PLANNING new buildings—or making OLD buildings look NEW—architects all over America are specifying Seaporcel because they can always depend upon Seaporcel as a happy solution to the problem of economically utilizing their construction appropriation.

Fabricated in any shape, form or section; rounds, compound curves, flutings, reedings, etc. Obtainable in such versatile textures as "Terra Cotta;" "Granite" in Semi-Matte or Gloss finishes; also our new "Leathorce!" finish.

Write today for copy of the Scaporcel idea brochure showing numerous sample installations.

SEAPORCEL METALS, Inc.

28-02 Borden Ave., Long Island City 1, N. Y.

complete A. F. of L. Metal Fabricating & Enamel Shop Also manufactured on the West Coast by

SEAPORCEL PACIFIC, Inc.
1461 Canal Ave.
Long Beach 13, Calif.

Seaporcel

ARCHITECTURAL
PORCELAIN ENAMEL

Complete Engineering and Erection Departments • Member: Porcelain Enamel Institute

that builders requiring this type of material could make their wants known to Washington with a certainty their request would be granted.

Only string attached here was the provision that use of the sheets would not mean a substantial increase in the quantities of copper and aluminum otherwise used. These metals — particularly copper — continued to regulate the overall pattern of CMP operation.

Fowler on Policy

NPA Administrator Fowler, announcing the permission for more commercial construction starting at midyear, said:

"This action was taken in line with our previously stated policy of issuing authorizations now for the construction of certain selected categories of public welfare and safety projects in order to allow sufficient time for the necessary planning and preparatory work, and allotment of necessary materials for later use.

"Thus we are providing immediately a basis for the essential preliminary architectural and engineering work; and, in turn, for the fabrication of small structural shapes; and finally, for the employment of men in the building trades in this particular type of construction."

The approval list included 446 churches; 110 firehouses, jails, police stations, etc.; 42 orphanages and homes for the aged; 29 YMCA's and boys' clubs; and 28 community buildings and civic centers.

Starts Allowed Now

"Materials will be allotted for these projects effective in the third quarter of 1952," said Mr. Fowler, "and in subsequent quarters where needed and requested to carry each project to completion. However, the authorizations now being issued will permit the start of preliminary construction such as exca-

(Continued on page 334)



Here is the doorway opposite but with a panel of regular single glaze glass. With a random clear glass block panel, prying eyes cannot see inside.

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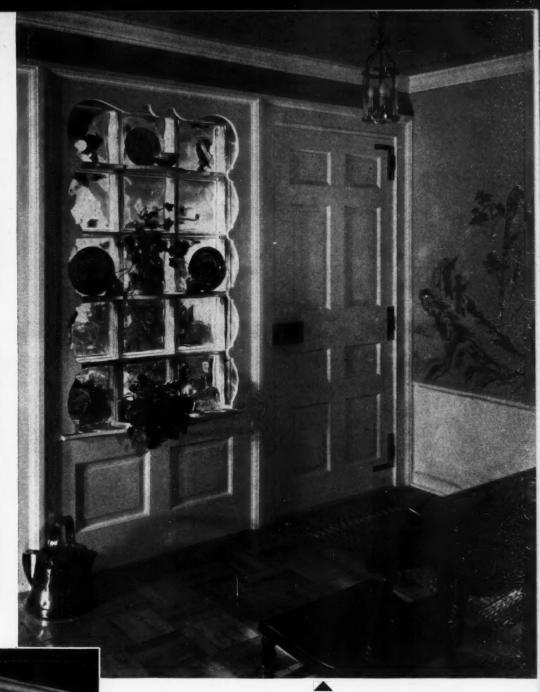
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By night, the entranceway glows with a light that radiates welcome to friends. By day, inside rooms are flooded with natural daylight.

This random clear panel retains all of the doorway's colonial charm. The subtle variation in the block face is reminiscent of old handmade glass.

GLASS BLOCK "GOES" WITH ANY ARCHITECTURE

WHETHER A HOME is traditional or modern, it can have the advantages of Insulux Glass Block[®]. Block patterns are available in a wide variety of face designs that "go" with any architectural design.

What other material offers you the opportunities to create such interesting, new architectural effects that are so decorative . . . so useful . . . yet so practical?

For information, write to Insulux Division, American Structural Products Company, Box 1035, Toledo 1, Ohio.

INSULUX GLASS BLOCK



A product of the Owens-Illinois Glass Company



Cast Iron Soil Pipe and Fittings production and sale have not been, and are not now, restricted in any way under the Controlled Material Plan. The materials used are not critical—foundry scrap, for example, is not the type of scrap needed for steel production. There is no need for you to specify substitutes under the impression that you are aiding military production.

Cast Iron Soil Pipe and Fittings are plentifully available to do their time-honored job — permanent installa-

tions that meet every plumbing code both inside and outside any type of building.

Architects have long been the first to recognize the importance of soil and waste disposal lines that will stand up year in, year out—decade after decade! And it's small wonder that plumbing codes everywhere in the country are built around cast iron soil pipe and fittings. You may, without hesitation, continue to specify cast iron from public sewer to roof vent.

This advertisement is sponsored by



CAST IRON SOIL PIPE INSTITUTE Alabama Pipe Company
The American Brass & Iron Foundry
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Anniston Soil Pipe Company
Attalla Pipe & Foundry Company, Inc.
Buffalo Pipe & Foundry Corporation
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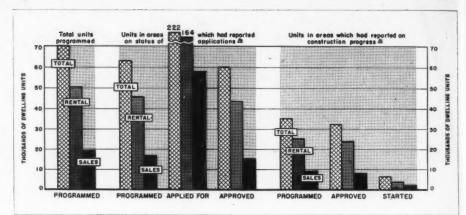
THE RECORD REPORTS

WASHINGTON

(Continued from page 330)

vations and footings wherever possible."

The generous gesture on the part of NPA resulted primarily from quantities of steel and copper earmarked for the purpose by DPA. Turnbacks from the military, shoved into the surplus category by the extension of timetables on



Planned for Expansion... so the Logical Choice was

DUTY STEEL BOILERS



HOME for JEWISH AGED Kansas City, Mo.

KIVETT & MYERS, Architects W. L. CASSEL. Engineer

Three Kewanee Heavy-Duty Oil-Fired Boilers installed by A. D. JACOBSON PLUMBING and HEATING CO.



In planning institutional buildings today . . . careful consideration must often be given to later expansion of both building and equipment facilities.

Kewanee Boilers are capable of producing more steam than is guaranteed by their rated capacities, hence are ideally adapted when later expansion is needed. This fact plus a well known dependability and economy of fuel makes Kewanee the logical selection for important buildings of every type.

KEWANEE BOILER CORPORATION KEWANEE, ILLINOIS

Eastern District Office: 40 West 40th St., New York City 18 on of AMERICAN RADIATOR & Standard Sanitary corpo



HHFA graph above shows status of defense housing programmed for private construction by mid-February. Status of application reports are due 15 working days after effective date of a program; first construction report due nearly three months after effective date of program. Units in applications from prospective builders outnumbered programmed units three-and-a-half to one

the most essential production programs, have made possible a certain easing of construction restrictions.

Freed for the newly authorized religious, municipal and community buildings were 44,062 tons of carbon steel, including 13,601 tons of structural steel, and 1,153,196 lb of copper wire.

Confusion and Uncertainty: A.G.C. Surveys Its Members

The general contracting industry is pervaded by confusion over materials controls and by uncertainties as to future volume of work. The pinch of controls is being felt to an increasing degree.

This pretty well sums up the current feelings of general contractors across the country, as revealed in a survey of its more than 6000 members by the Associated General Contractors of America, Inc. before the annual A.G.C. convention in Detroit the last week in February.

It was not surprising that many of the general contractors responding to the survey noted that they felt controls on construction materials were not realistic.

Tapering-Off Noted

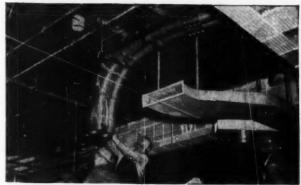
Responses reflected the tapering off from the faster temp of 1951. The industry was found to be operating "substantially below capacity" and according to the A.G.C. analysis of the survey

(Continued on page 338)

At Pittsburgh's newest skyscraper, the 525 Wm. Penn Place Building, Robertson Q-Floor construction has simplified and speeded the work of every sub-contractor. Each floor is a clean, uncluttered, available working area.



No forms or shoring to hinder them, each trade can work safely with materials and equipment immediately loaded on the Q-Floor. No need to use streets or sidewalks for storage.



No pre-set inserts are required to hang mechanical equipment from Q-Floor. Hangers for each purpose are quickly dropped through holes in the cellular steel floor. They can be moved without difficulty or expense in case of layout change.

CUTS COST all along the line . . .



for the CONTRACTOR

The cellular-steel sub-floor construction provided by Robertson Q-Floor results in immediate benefits to the general and sub-contractors. The minute that Q-Floor units are laid in place they become a working platform for all trades, their equipment and materials. This means a clean job site, with streets uncluttered, and a safer job for workmen throughout. There is no waiting for wet materials to set, no time wasted during freezing weather, and no danger of construction fires. The entire job is speeded, requiring a shorter construction financing period. Everything adds up to lower costs.

for the ARCHITECT AND ENGINEER

Q-Floor construction reduces costs and headaches for the architect and engineer by cutting out non-productive drafting room time making the innumerable changes that are bound to come up. With Q-Floor no pre-set inserts are required for the hanging of ceilings and mechanical equipment. Changes can be taken in stride. Electrical, telephone desk and partition layout need not be definitely pinned down until the last moment . . . Q-Floor construction cuts costs because it affords complete flexibility of layout.

for the OWNER and TENANT

The owner benefits because, first, Q-Floor construction is light-weight... reducing expensive dead load throughout the building. Second, Q-Floor construction is fast. The building is finished sooner and the owner begins to get a return on his investment sooner. Third, Q-Floor will guarantee his building against electrical obsolescence and the threat of lower rent return over the years. The tenant benefits because the changes to office layout (which he always must pay for) are reduced. He can have the office he wants, and change it at will, at a tremendous savings in cost.

WRITE FOR COMPLETE DETAILS

H. H. ROBERTSON CO.

General Offices



Pittsburgh, Pennsylvania

Offices in All Principal Cities in United States and Canada World-Wide Building Service "Who said'A rose by any
name would
smell as
sweet'?"

"Shakespeare.
But he'd never
have said it
if he'd been
an architect"



Swapping sentences for steel, epigrams for equipment, Shakespeare as an architect, would soon learn that names like Edwards do count. He'd find that while a rose under any name might smell sweet, equipment can go mighty sour unless its maker's name spells dependability. He'd know that for over 80 years Edwards equipment has been so reliable, trouble-free, efficient an architect can specify . . . and forget it. That's another reason why, when you choose signaling equipment, it pays to remember Edwards.



World's Most Reliable Time, Communication and Protection Products For Schools, Hospitals, Industry and Homes.

Specify Edwards and Be Sure

America's schools run more smoothly
. . . America's school children are
better protected thanks to Edwards.



Edwards Automatic Clock and Program Control Systems, models of precision engineering, regulate school traffic with split-second accuracy. This ingenious system requires no master clock, no mercury pendulums, rectifiers, condensers or radio tubes. Built around the famous dual-motored Telechron movement, Edwards Clocks are synchronized to ever accurate incoming alternating current . . . one or a hundred timepieces keep perfect time together. Virtually errorfree, they run for years without costly servicing.

Last word in safety, first in beauty are Edwards Fire Alarms. Trim, smart, func-



tional they hug the wall with only 1%" projection... operate simply, easily with foolproof dependability. No chance of human failure... no chance of non-alarm through haste or panic.

For further information, write Dept. A-4, Edwards Company, Inc., Norwalk, Connecticut



Carry power to the skyline

with Chase Bus Conductors

To build high, you need the high electrical and thermal conductivity and high current-carrying capacity of Chase Square Copper Tube Bus Conductors. They will carry the total electrical energy vertically with a minimum of short circuits, overheating as well as other disturbances.

For full information about stronger, better bus conductors, write for the literature on Chase Square Copper Tube Bus Conductors offered in the coupon below.

Chase BRASS & COPPER

FREE Chase Bus Conductor Brochure gives physical and electrical characteristics as well as data on copper saving.

______ Chase Brass & Copper Co., Dept. AR452 Waterbury 20, Conn. Please send me the Chase Copper Tube Bus



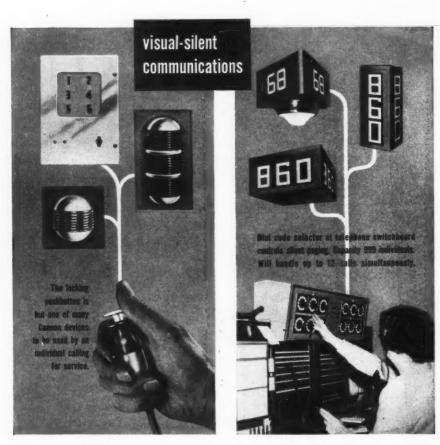
CANNON

signal systems

VISUAL-SILENT COMMUNICATIONS for individual service or for general paging purposes have been highly developed by Cannon Electric over a 35-year period.

The Visual-Silent method may be used in conjunction with an audible system if desired. There are many areas where the Visual-Silent system is far superior, such as hospitals, restaurants and department stores or where the noise level is too high for practical operation of an audible system, for instance in machine shops, factories or other production areas.

The two basic approaches to Cannon Electric's Visual-Silent communications are illustrated here. (1) the individual requiring service (below, left) (2) the general paging of numerous individuals in large areas or in a group of buildings (right).





The great diversification of the equipment and the variations of installations to serve many signaling requirements are described and illustrated in this new 32-page bulletin available on request. Address Dept. 8-122, Cannon Electric Company, P. O. Box 75, Lincoln Heights Station, Los Angeles 31, Calif.

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Since 1915

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Factories in Los Angeles, Toronto, New Haven. Great Lakes Division, Benton Harbor, Michigan. Representatives in principal cities.

THE RECORD REPORTS

WASHINGTON

(Continued from page 334)

results, this situation was expected to intensify during the first half of 1952.

A good deal was said about the need for more advance planning of nonresidential projects. The A.G.C. report took up this theme in urging a better plan for preassurance of controlled material allotments. This procedure would give builders definite commitments on materials for use at a future date on projects in the planning stage.

What "Preassurance" Might Do

Movement in the direction of "preassurance" could eliminate many of the troubles reported by the contractors, it was felt, including hesitancy on the part of awarding authorities and reluctance on the part of investors.

Notice of when materials would be available and assurances of future deliveries on approved projects to promise their completion without interruption were called for.

Said A.G.C.:

"A general halt in advance planning would mean a serious lag in getting construction under way once the projects are permitted to go ahead, resulting in unemployment during the period between commencement of architects' plans and start of construction."

Less than half the contractors polled considered advance planning for future work to be adequate. Nearly two thirds of those responding to the survey called it inadequate.

What A.G.C. Wants

Recommendations made to the government were summarized by H. E. Foreman, A.G.C.'s managing director, in his annual report to the Detroit meeting:

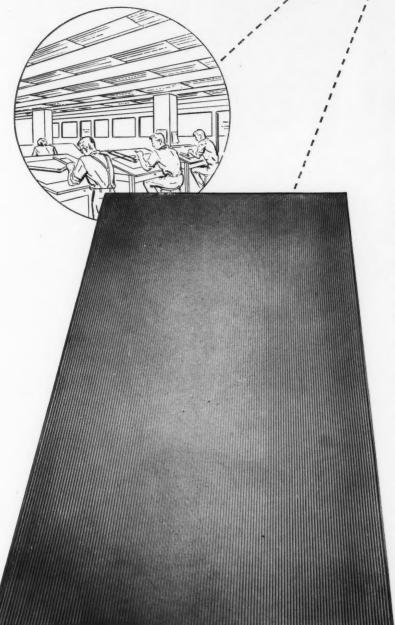
The construction industry should have adequate representation on mobilization agencies so that proper consideration could be given to the essentiality of the industry's operations.

Allocations should be made to projects for only the amounts of materials which can actually be used during various quarters to insure an equitable distribution of available materials.

Approval of a project should imply that allocations will be given for all of the materials as they can be used,

(Continued on page 342)

for excellent FUNCTIONAL lighting . . .



CORNING'S CRYSTA-LITE!

Good functional lighting directs maximum light into the working zone. Corning's CRYSTA-LITE prismatic lens panels do even more. Linear prisms eliminate high-level glare of fluorescent light by bending the high-angle rays downward into zones where they are most useful for illumination—giving you more light for seeing plus accurate brightness control.

Lightweight CRYSTA-LITE is made of waterwhite crystal glass and is not color selective. There is no distortion of the color source, making surroundings more pleasing . . . merchandise more appealing.

Especially suitable for long runs as well as individual fixtures, it is available in widths up to 24", lengths up to 100." CRYSTA-LITE may be obtained from leading fixture manufacturers, many of whom feature CRYSTA-LITE in their fixtures. For further details on all types of Corning engineered lightingware, send for Bulletin LS-32; Photometric sheets also available.



CORNING GLASS WORKS

CORNING, NEW YORK'

Corning means research in Glass

VISIT THE NEW CORNING GLASS CENTER

Technical Products Division: Laboratory Glassware, Signalware, Glass Pipe, Gauge Glasses, Lightingware, Optical Glass, Glass Components



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Please send	Bulletin	LS-32	describing	CRYSTA	-LITE
Photomet	ric sheets.				

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We'll keep your material moving

. . . anything, from light-duty freight to power trucks for scheduled vertical-linkage in your materials handling system.

We can offer you the economy of standard freight elevators for regular service. And special adaptations for the unusual. Plus uninterrupted operation.

We deal in height. Moving material and men vertically. More than half of the world's freight moves on Otis elevators. Our broad experience is available, without charge, to everyone.

Otis is the only elevator manufacturer that designs and builds everything from pit to penthouse. Based on: Research that advances electronic operation • Planning that gives better service with fewer elevators • Engineering that turns tested theory into better elevatoring • Manufacturing that concentrates entirely on vertical transportation · Construction that brings elevator-trained men to your installation • Service that's available 24 hours a day in 263 cities.

This background of elevator experienceunequalled anywhere-delivers the promise that forms the basis of every Otis contract: The world's finest elevatoring. Otis Elevator Company, 260 11th Ave., New York 1, N. Y.

Better elevatoring is the business of



Passenger Elevators Freight Elevators Electric Dumbwaiters • Escalators

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REINFORCED CONCRETE FLOORS WITHOUT FORMS

Sounds unbelievable...but Cofar did it. In one manufactured product, the costliest element of reinforced concrete construction—wood forms—and all of the conventional positive re-bars were eliminated. Cofar, the reinforcement that forms, is a product of extremely high strength flat rolled steel which performs this dual function.

Cofar fits the building frame. Quickly placed, it provides an immediate working surface for trades. Cofar weighs less than the conventional positive reinforcing it replaces, maintaining the full steel saving advantages inherent in concrete construction. Conventional reinforced concrete design procedures apply for simple or continuous spans. Cofar is equally suited to concrete or steel frame construction.

Cofar is hot-dip galvanized providing building life permanence. Extended fire protection beyond any requirement is provided by suspended lightweight plaster ceilings. Exposed Cofar without a suspended ceiling has important fire resistant qualities.

Cofar has lowered substantially the cost of concrete floor construction, changing conventional construction type selections and permitting economical electrical and utility services in the structural slab. Cofar residential floors, increasingly used, give ample evidence to cost advantages compared to normal wood floor construction.

Cofar is approved by the Building Officials Conference of America, by the Pacific Coast Building Officials Conference and by many major cities.

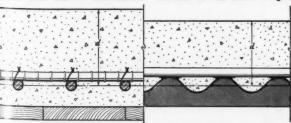


Conventional Slab

Positive and temperature bars eliminated with COFAR construction.

Cofar Slab

COFAR slab thickness reduced because of less dead weight.



forms eliminated with COFAR construction. Concrete below reinforcement

Comparative Cross Sections of Conventional and COFAR Concrete Slabs.

Corrigan Tower Building, Dallas, Texas Wyatt C. Hedrick, Architect J. W. Bateson, General Contractor Tom L. Harpster, Steel Erectors

For complete technical or general information, advice on application and design, review of COFAR designs, estimates and costs for any COFAR project, write: Dept. 10-1

GRANCO STEEL PRODUCTS CO. (Subsidiary of Granite City Steel Co.) Granite City, Illinois for the exact needs of your institution

HOFFMAN offers COMPLETE LAUNDRY EQUIPMENT SERVICE

at ST. JOSEPH'S HOSPITAL Syracuse, N. Y.

Expanded laundry includes Hoffman washers, 48" and 20" extractors, two 36 x 30 tumblers, 8-rall flatwork ironer and fully automatic control stations for complete processing of washer loads without attention. Output has increased 331/3%.



You can simplify the planning and setting up of institutional laundries by calling on Hoffman's all-inclusive equipment service. Hundreds of hospitals, large and small, have modern, efficient and economical laundry operation because they started *right* with Hoffman assistance.

Hoffman builds a complete line of modern laundry equipment, including many advanced design types providing important time and linen savings. Your Hoffman representative has the career experience to advise you on just the right models for your particular needs. Call him into consultation without obligation.

For Your New or Modernized Laundry, Get a HOFFMAN Laundry Survey. No Obligation!

Complete analysis of your laundry requirements. Includes a survey of your linen usage and recommended inventory control systems . . . modern work-flow layouts and specifications . . . detailed suggestions on equipment and accessories, to help you save floor space, time, labor, fuel, linen and supplies. Ask for it.

WRITE FOR NEW BULLETIN A-848



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WASHINGTON

(Continued from page 338)

giving assurance that the project can be completed.

Notice should be given of when materials are likely to be available for types of projects now postponed in order to encourage advance planning.

A simple priorities system for defense projects should be established when it is found that the complicated Controlled Materials Plan is not needed in a peacetime economy.

"Plan It Now"

Architects would echo one passage from the Foreman report:

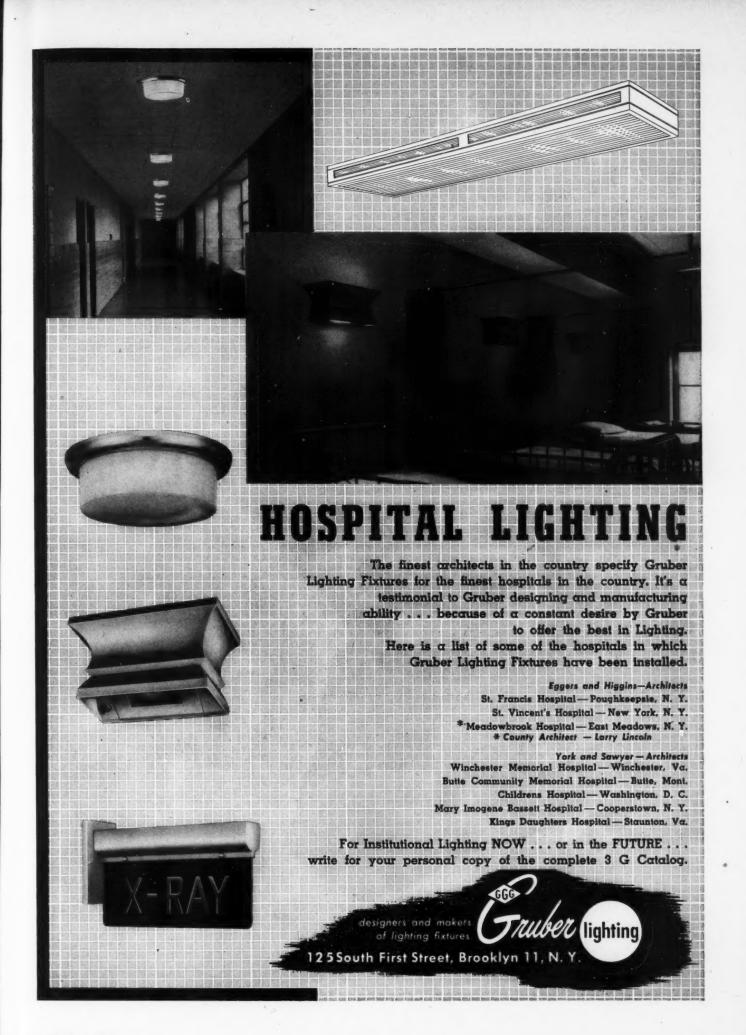
"While many types of construction are being postponed by government action, the opportunity is presented for the sound advance planning of the increasing backlog of needed construction so that this work can be started promptly when materials are available and controls are relaxed."

Addenda

• The January 31 tabulations on hospital construction as administered by the Public Health Service under the Hill(Continued on page 346)



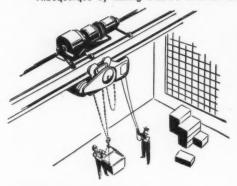
John C. Houston Jr. is the new executive vice chairman of the Department of Defense Munitions Board. In his new post Mr. Houston will act for Chairman J. D. Small in the general management of Board activities in relationship with industry, military departments and other governmental and Department of Defense agencies



American Blower...a time-honored name in air handling



Albuquerque, N.M., has a conveniently located American Blower effice to provide you with data and equipment for air handling. You can reach American Blower in Albuquerque by calling 3-2247. In other cities, consult your phone book.



SMOOTH POWER

If you're concerned with power transmission you'll want to know more about our Gyrol Fluid Drives. They offer three important advantages—smoother acceleration, overload protection and substantial power savings. One company uses Fluid Drive on a crane that picks up ladles of hot metal. Before they were installed, the ladles got a violent swing from the quick start and were hard to control. Since using Fluid Drives they've had no trouble.



R FOR AIR

One of the stiffest tests air handling equipment can get is that imposed by hospital laboratories. Cultures and tests require a sterile atmosphere. Temperature and humidity must often be closely controlled. Recently, a large university hospital selected American Blower ventilating equipment for its new laboratory . . . a fine tribute not only to the quality of American Blower products, but also to the effectiveness of our research and testing methods. Why not put this valuable experience to work for you?



BETTER BURNING

American Blower Mechanical Draft Fans play an essential part in the efficient operation of several new municipal waste disposal works. The high static efficiency, low RPM, low tip speed and rugged construction of these dependable fans help provide and maintain proper combustion without high power costs. In military or civilian installations American Blower equipment meets the most exacting requirements. If you are expanding or enlarging your facilities, consult us.

If your needs call for heating, cooling, drying, air conditioning or air handling equipment you'll find American Blower an excellent source of supply. For data phone or write our nearest branch office.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO

Division of AMERICAN RADIATOR & Standard Sanitary corporation



WI

Unit Heaters



Mechanical Draft Fans



Dust Collectors



Gýrol Fluid Drives



Industrial Fans

YOUR BEST AMERICAN



BLOWER

AIR HANDLING EQUIPMENT

Serving bome and industry: American Standard . American blower . Acme Cabinets . Church Seats . Detroit Lubricator . Kewanee Boilers . 2025 Meater . Tonawanda 1890

a Hill job* well done

PITTSBURGH PERMAFLECTOR LIGHTING EQUIPMENT

OUTSTANDING! This one word completely describes the illuminating results so easily and successfully achieved at famous Wurzburg, the heart of Grand Rapids. Pittsburgh Permaflector Equipment enabled Wurzburg to plan with imagination and light for their needs. Top performance with "custom designed" appearance was assured. Fluorescent and incandescent units, and combinations of both, meet every lighting requirement.

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FOR MORE LIGHTING KNOW-HOW

PITTSBURGH REFLECTOR COMPANY

402 OLIVER BUILDING . PITTSBURGH 22. PENNSYLVANIA

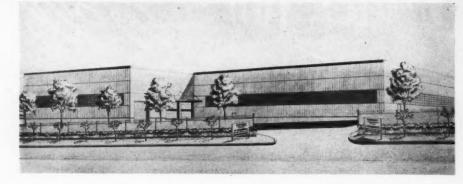
MANUFACTURER OF FLUORESCENT & INCANDESCENT LIGHTING EQUIPMENT

Permaflector Lighting Engineers in All Principal Cities

THE RECORD REPORTS

WASHINGTON (Cont. from p. 342)

Prefabricated stainless steel siding was used for the new \$1,000,000 plant of the E. F. Hauserman Company, opposite the company's main plant in Cuyahoga Heights, Cleveland. The recently-completed one-story plant contains 67,000 sq ft of floor space. Architect: George F. Rider Company





Burton Act showed a total of 1735 projects approved. This represented an estimated construction cost of \$1,320,377,503, of which the total federal share was to be \$473,138,729.

The activity was adding 83,152 beds (269 health centers were included) to the nation's supply. Of these, 27,967 beds in 795 separate projects already were in operation; 47,027 in 783 projects were under construction; and an additional 8158 in 157 projects were represented in applications given initial approval by the PHS.

Heavy Hill-Burton construction activity continued to center in the southern states and California.

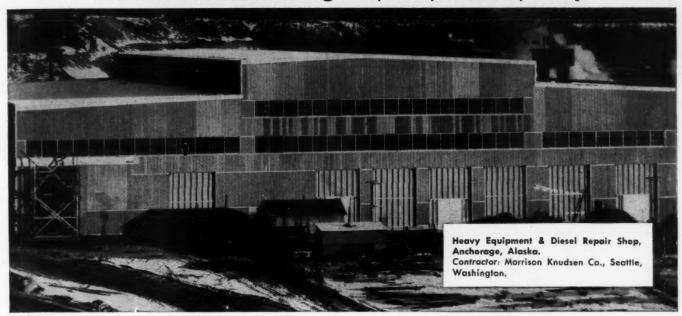
• The new housing order (M-100) provided for substitution of aluminum for copper for electrical wiring systems on the basis of one lb of aluminum for two lb of copper.

This provision recalled a recent recommendation to NPA by its Electrical Wiring Devices Industry Advisory Committee that substitution of aluminum wire for copper be discouraged in branch circuit wiring.

The committee members said use of aluminum in wire size 8 and smaller, as suggested by NPA, would mean their retooling to some extent to produce larger devices, particularly screws and boxes.

But electrical contractors appeared to be satisfied with the M-100 stipulation. They do favor, however, a greater concentration on use of aluminum in heavier installations where the more brittle nature of the metal lends itself to easier handling. This, they say, would save substantial quantities of copper for use in home wiring systems.

• The test house built within an air conditioned laboratory at the National Bureau of Standards is one example of (Continued on page 350)



Alaskan Building Completely Enclosed in 30 Days...in near zero weather!

This Diesel Repair Shop at Anchorage, Alaska, is 230 by 320 feet.

It went from skeleton to finished building in just 30 days (and the weather was nearly zero).

One small crew did the work.

This is no special case, it happens every day. And you can duplicate the feat, or build even faster, if you think in terms of Fenestra* "C" Metal Building Panel construction before you even put pencil to paper.

Design with these things in mind:

A 12' long Fenestra "C" Panel gives you 16 sq. ft. of wall area, yet weighs only 6½ lbs. per sq. ft. So you won't need such a heavy foundation or nearly so much hard-to-get structural steel.

Each Fenestra "C" Panel is a 3" thick prefabricated unit packed with glass fibre insulation. Your Panel

Wall will prevent heat loss more efficiently than a 16" thick masonry wall. And look at the extra floor area you get with this more compact wall construction.

Fenestra "C" Panels have double tongue and groove joints . . . you get perfect joints and weathering.

Remember—you can build by areas instead of by inches.

You can build in any kind of weather (even zero weather).

You can build faster, better and with less structural steel,

Call your Fenestra Representative for complete information. Or write Detroit Steel Products Company, Dept. AR-4, 2252 East Grand Blvd., Detroit 11, Michigan. *Trademark

Fenestra METAL BUILDING PANELS

...engineered to cut the waste out of building



"D" Panels for floors, roofs, ceilings. Standard width 16". Depth 1½" to 7½".



Acoustical "AD" Panels for ceiling-silencer-roof. Width 16". Depth up to 71/2".



"C" Insulated Wall Panels. Standard width 16". The depth is 3".



Holorib Roof Deck, 18" wide—lengths up to 24'. Surface can be plain or acoustical.

Skylike blends 2 types of lighting units into 1

1. the soft, indirect light of silvered-bowl incandescent lamps.

2. the sleek, modern look of fluorescent-type troffers.

Silvray SKYLIKE lighting offers advantages found in no other system, yet uses only silveredbowl incandescent lamps,

Designed along modular concepts for recessed or semi-recessed use, SKYLIKE fixtures may also be surface-mounted in old or remodeled interiors without sacrifice in lighting quality.

Silvray SKYLIKE units are amazingly economi-

Here's real proof of SKYLIKE efficiency . . . unretouched photographs demonstrate the versatility of the SKYLIKE louvered incandescent lighting system. In each case, the only light

cal in initial cost — only $\frac{1}{2}$ to $\frac{1}{3}$ as much as other equipment delivering comparable results. Ease of maintenance permits similar savings — units can be relamped from the floor and require only an occasional cleaning with a damp cloth.

SKYLIKE fixtures fit 24" x 24" ceiling tile ... are light in weight, easy-to-handle, and require only minimum framing support.

source used was that of the SKYLIKE units—note the soft, even distribution of light...the complete absence of glare, harsh shadows, and sharp light cut-off lines.



Photo by Milton Mann Studios

A unique SKYLIKE application is pictured here in the showroom of Irving A. Belking Furs in San Francisco, California.

Notice how architect Bernard J. Saboroff's gridwork of 1 x 6 pine serves to hide the unsightly high ceiling, as well as to support the patterned group of recessed Silvray SKYLIKE units. Low brightness levels and 90° shielding provide an extremely satisfactory result.



Selected for warm color and ease of installation, surface-mounted SKYLIKE units replaced out-moded globe-type units in the remodernization of the Levy Brothers Store in Elizabeth, N. J.

Variable lamp sizes — from 150 to 500 watts — permit day-to-day changes in lighting intensities. Units can also be converted for accent or directional lighting by use of a semi-silvered lamp and accessory.



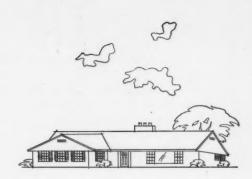
Send for complete SKYLIKE information. A comprehensive booklet describing the SKYLIKE system is yours for the asking. To get your copy, write Skylike Lighting, Inc., 102 West Main Street, Bound Brook, N. J.

SKYLIKE LIGHTING, INC. is a Silvray-associated company



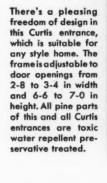








Here's a Curtis mantel that reflects the changes created by modern living—yet at no sacrifice of beautiful detail. The usual shelf is eliminated, and the bowed fascia board accentuates its beauty. Curtis offers a number of mantel designs for your choice.





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City		 	 											S	te	n A									

THE RECORD REPORTS

(Continued from page 346)

the kind of continuing research project sponsored by the Housing and Home Finance Agency's Division of Housing Research.

The test house is playing a significant role in development of home heating systems.

"Almost every conceivable method of heating, from the conventional to the

most radical, has been tried and tested in this structure," says Joseph H. Orendorff, acting director of the division.

"Several favorite schemes of the heating industry's more imaginative minds have either been evolved as practical systems or discarded as a result of this work. For example, almost every furnace manufacturer now builds at least one unit of the upside-down or counterflow type. More new developments are sure to result as the project continues."

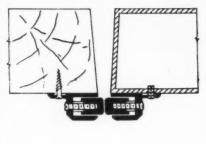
• Defense Manpower Policy No. 4, issued from the Office of Defense Mobilization, is guiding procurement officers in the placement of procurement in areas of "current or imminent labor surpluses."

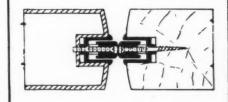
One of the stated purposes of this directive is to preserve employee skills necessary to fulfill government contracts and purchases.

Another: to secure utilization of the nation's total manpower potential by making use of all the manpower resources of each area.



Write today for information and prices on Michaels Adjustable Astragals. Made of extruded bronze, aluminum or nickel, they are simple, practical, rugged, easily installed and adjusted, and available in several styles. Two are shown above. Type A (top illustration) may be applied to either wood or hollow metal bevel doors. Also used as a stop bead. Type E (lower illustration) is for bullnose hollow metal or wood double acting doors. Both types may be used at the bottom of doors. Michaels Astragals help keep doors closed tightly...eliminate drafts and air currents . . . keep out dirt and dust. Write for details.





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Stair Railings (cast and wrought)
Wrought and Cast Radiator Grilles
Grilles and Wickets
Kick and Push Plates
Push Bars
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Museum Trophy Cases

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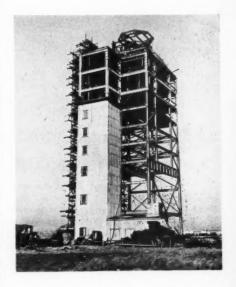
Manufacturers since 1870 of many products in Bronze, Aluminum and other metals

ON THE CALENDAR

Apr. 4-May 18: Cezanne: paintings, watercolors and drawings; an international loan exhibition organized in cooperation with the Art Institute of Chicago — The Metropolitan Museum of Art, Fifth Ave., at 82nd St., New York City.

April 5: Design Seminar, Indiana Society of Architects — University of Notre Dame, South Bend, Ind.

(Continued on page 354)



Construction photo shows nearly completed new control tower at New York International Airport, Idlewild, Queens, N. Y. The tower is 150 ft high, will eventually be incorporated into the proposed permanent terminal building. Cost of the steel and concrete tower: \$1,000,000



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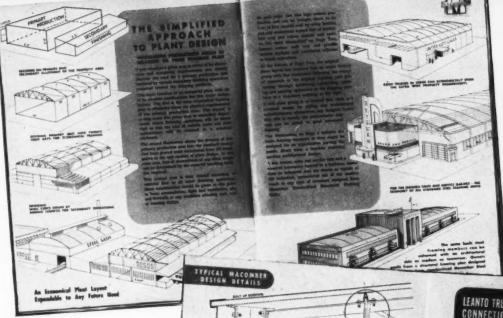
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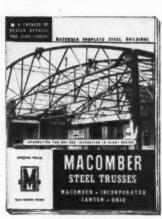


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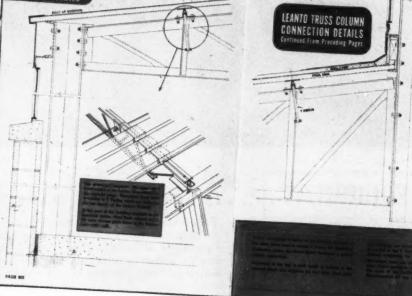


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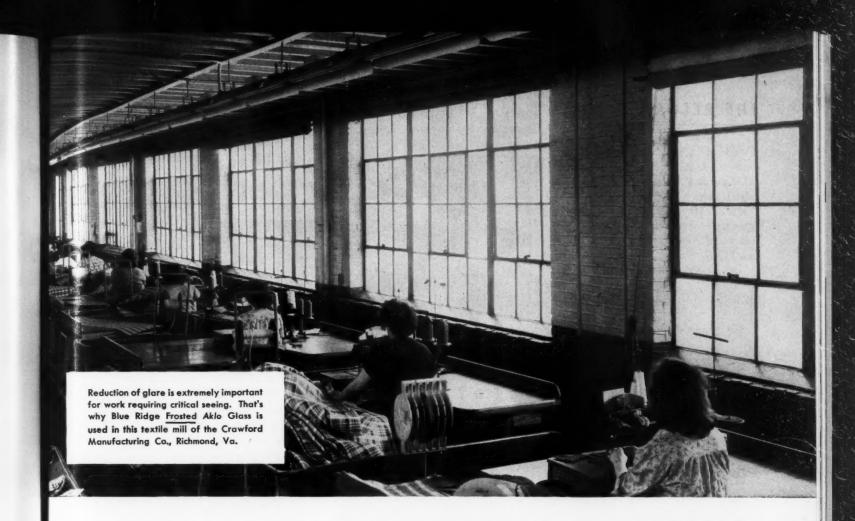
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Company		
Address-		
City	State	

THE RECORD REPORTS

(Continued from page 350)

Apr. 5-9: Regional meeting and exhibit, American Association of School Administrators — Boston.

Apr. 7-May 2: Gold Medal Exhibit, Landscape Architecture, Architectural League of New York — League Building, 115 E. 40th St., New York City.

Apr. 8: The Film Approach to Art; ninth of 12 evenings presented by the Junior Council — Auditorium, Museum





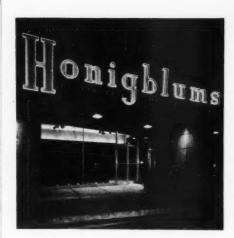
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Honigblums' "one-stop" home furnishings store in San Antonio, Tex., has a sales area of 24,000 sq ft all on one floor, and a store-front 168 ft long, with front-door parking available the entire length of the structure. Exteriors are glass, redwood, stone and stucco. Architects: Shoop & Roberts



of Modern Art, 11 W. 53rd St., New York City.

Apr. 10-June 22: American Group Show; large showing of work by contemporary American artists from various parts of the country — Museum of Modern Art, 11 W. 53rd St., New York City.

Apr. 20-May 11: Today's House; exhibition of residential work by 20 architects — contemporary Arts Association, Houston, Tex.

Apr. 21: 48th Annual Meeting, American Wood-Preservers' Association — Hotel New Yorker, New York City.

Apr. 22: Modern Artists on Artists of the Past; tenth of 12 evenings presented by the Junior Council — Auditorium, Museum of Modern Art, 11 W. 53rd St., New York City.

(Continued on page 358)

A LEADING SPECIFICATION

B

SINCE 1907



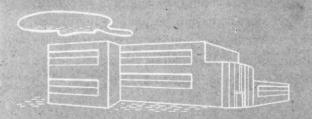
STUCCO
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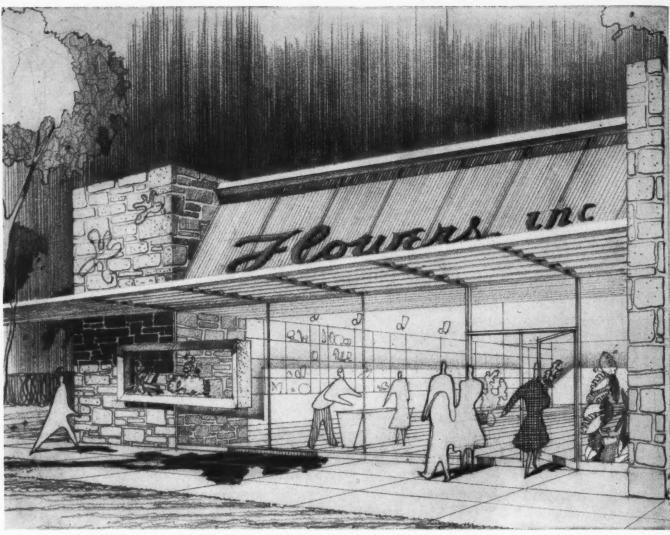
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plate glass doors that say, "Come in!" Mirrored walls reflect and multiply the merchandise. Single-glazed clerestory windows may be clear glass or any of a number of patterns.

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Plastering Contractor: Storbeck & Gregory, Dallas, Tex.



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2. ONE SIDE of the partition is temporarily braced with horizontal and vertical channels. One centered horizontal channel is needed on walls up to 9 feet. Wood studs or metal can be used for this temporary bracing.



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THE RECORD REPORTS

(Continued from page 354)

Apr. 24-25: Architects' Seminar on Hospital Planning and Construction, co-sponsored by Virginia Chapter, American Institute of Architects, in conjunction with annual meeting of Carolinas-Virginias Hospital Association — Hotel Roanoke, Roanoke, Va.

May 1-2: Regional Conference, Middle Atlantic District, American Institute of Architects — Bellevue-Stratford Hotel, Philadelphia.

May 3-11: New England Home Show, sponsored by the Home Builders Association of Greater Boston — Mechanics Building, Boston.

May 5-16: British Industries Fair— Earl's Court and Olympia, London; Castle Bromwich, Birmingham, England

May 6: A Concert of Rarely Performed French Music; 11th of 12 evenings presented by the Junior Council —

Auditorium, Museum of Modern Art, 11 W. 53rd St., New York City.

May 6-9: Fourth International Lighting Exposition and Conference — Municipal Auditorium, Cleveland.

May 7-July 6: New Talent; fourth in a series of exhibitions of work by artists who have not had major shows in New York — Museum of Modern Art, 11 W. 53rd St., New York City.

May 19-24: First International Churchman's Exposition, including architectural exhibition — Chicago National Amphitheater, Chicago.

June 1-4: Annual Meeting, American Society of Heating and Ventilating Engineers — Atlanta, Ga.

June 2-5: National Plumbing and Heating Exposition, sponsored by the National Association of Master Plumbers — Convention Hall, Atlantic City, N. J.

June 7: Annual Meeting, Indiana Society of Architects — Construction League, Indianapolis.

June 9-21: Triennial Meeting, International Organization for Standardization; American Standards Association, host — Columbia University, New York City.

June 11-26: 12th Antique Dealers' Fair and Exhibition — Great Hall, Grosvenor House, Park Lane, London.

June 23-25: Sixth Annual National Meeting, Forest Products Research Society — Milwaukee, Wisc.

June 23-27: 84th Annual Convention, The American Institute of Architects (Continued on page 362)



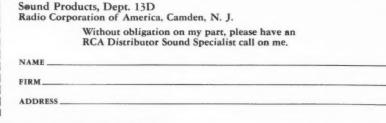
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Pittsburgh's newest hotel, the 22-story Carlton House (photo of rendering above) opened its first rooms for occupancy last month — 100 transient rooms and suites. Completion of the building is scheduled for this month. Francis L. Keonig is architect of the hotel for the Ring Engineering Company of Washington, D. C.





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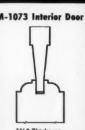


At right: Morgan Tri-Panel Interior Door M-1073

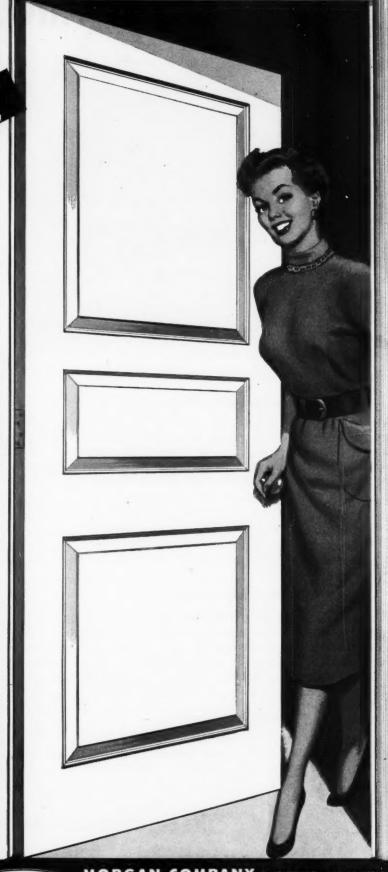


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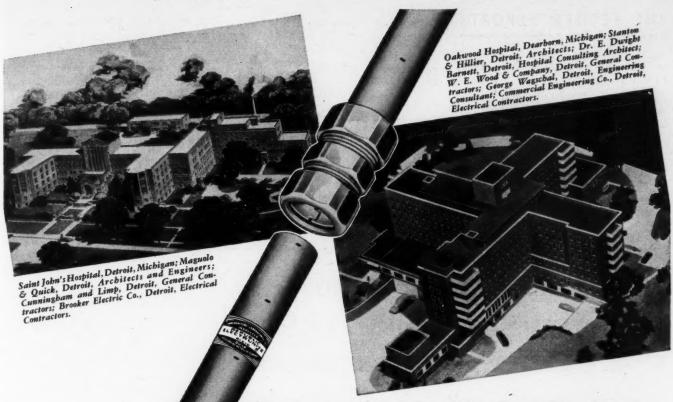
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THE RECORD REPORTS

(Continued from page 358)

— Waldorf-Astoria Hotel, New York City.

June 23-27: Annual Meeting, American Society for Testing Materials; exhibit of testing apparatus and laboratory supplies and photographic exhibit—Hotels Statler and New Yorker, New York City.

June 25: Crossroads in Architecture; last of 12 evenings presented by the Junior Council — Auditorium, Museum

of Modern Art, 11 W. 53rd St., New York City.

OFFICE NOTES

New Offices

• George Blumenauer, architect, has announced the opening of his new office at 1012 Baltimore, Kansas City 13, Mo., to continue his practice in the field of hospital planning.

- Isadore Rosenfield, architect and hospital consultant, of New York City, announces the opening of a Pacific coast office in association with Rex Whitaker Allen, architect, at 566 Commercial St., San Francisco 11, Calif.
- John W. Harris Associates, Inc., builders with main offices in New York, have announced the establishment of John W. Harris Ltd. as a Canadian affiliate. The new corporation will have its main office in Toronto, with Kenneth D. Demarest, executive vice president, in charge.
- The American Federation of Arts has opened new headquarters for its membership and exhibition services at 1083 Fifth Ave., New York City. The Federation will continue to maintain its Washington headquarters at the present location, until a more suitable one is found.

Firm Changes

• The firm of Bettenburg, Townsend and Stolte, architects and engineers, of 1437 Marshall Ave., St. Paul, Minn., announces the withdrawal from partnership of Donald W. Pung.

The firm will continue as a partner-ship of Brig.-Gen. Philip C. Bettenburg, George B. Townsend, and Sidney L. Stolte, all members of the American Institute of Architects and of the National Society of Professional Engineers, and Gordon M. Comb, A.I.A. General Bettenburg is at present on active duty as deputy commander of the 47th Division, Camp Rucker, Ala.

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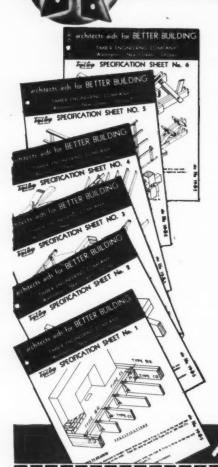
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- The Preload Company of 211 E. 37th St., New York 16, N. Y., has revised its operating policy to make the firm's services as consulting engineers in prestressed concrete design available to all architects, engineers and contractors. The company until now has designed prestressed structures under license of its numerous patents exclusively for its domestic construction subsidiaries and its foreign licensees.
- Election of two new vice presidents has been announced by the Rust Engineering Company. They are Charles D. Haxby, formerly general construction superintendent, and S. W. Galloway, formerly manager of proposals and estimates.

(Continued on page 366)

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Every frame connection is more rigidly fastened with 18 gauge steel anchors. Because loads on nails are in shear, each nail performs at maximum efficiency. Trip-L-Grip Anchors eliminate notching and shimming joists — replace ledger strips — tie roofs securely, to sidewalls, help prevent uplift due to wind.

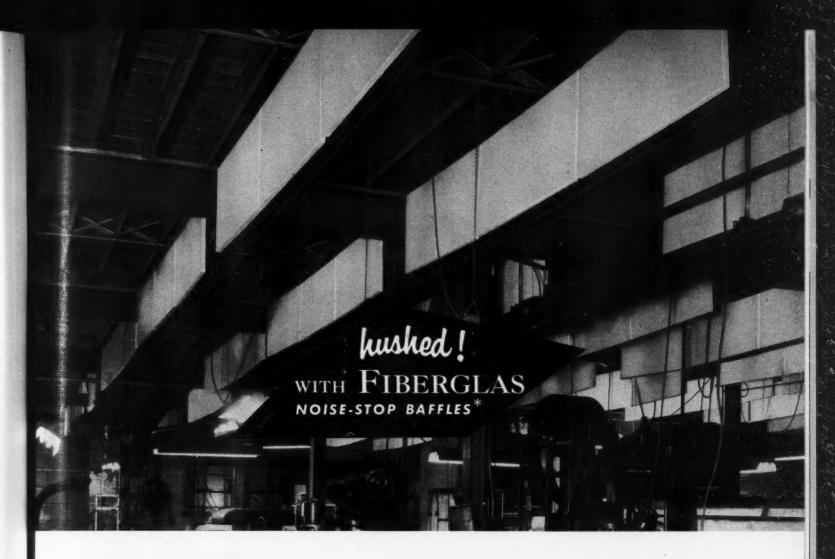
NO NAIL WORRY — Full bodied nails come packaged with the Anchors. Anchors are in 3 types of rights and lefts. Anchors are 4%" high, rectangular flange is 15%" wide, and bent portion is 15%" long.

TIMBER ENGINEERING COMPANY, 1319 18th St., N.W., Wash. 6, D. C.

Please	send	me	FREE	set	of	AIA	File	19B-5	Trip-L-Grip	Data	Sheets,	anchor	samples
prices.													

FIRM_____ADDRESS_____

AR



NOISE-STOP BAFFLES for industrial areas . . . latest Fiberglas* acoustical achievement!

Here's a practical solution to the problem of annoying plant noise—Noise-Stop Baffles, newest addition to the complete Fiberglas line of acoustical products. Installation ranges from ½ to ½ the total cost of a standard acoustical ceiling depending upon plant conditions. Many other applications, such as gymnasiums, laboratories, arenas, are possible.

Noise-Stop Baffles are 2' x 4' units of non-combustible Fiberglas board encased in a dust and lint-repellent plastic film. The baffles are suspended vertically from wires spaced to fit overhead conditions, such as sprinklers, pipes, wires, lighting, etc. Installation does not interfere with production and can be made easily and quickly.

All recognized and accepted Fiberglas values are incorporated: fire safety, good light reflection, resistance to moisture and humidity, and effective sound conditioning qualities. Easily cleaned, moved and maintained.

For complete technical data and costs call the local Fiberglas acoustical contractor listed in the yellow pages of the phone book, or write to: Owens-Corning Fiberglas Corporation, Dept. 68D, Toledo 1, Ohio.



- Make working conditions more comfortable
- Talk instead of shout
- Lower distracting noise in adjacent offices
- Reduce errors and spoilage
- Lessen "time out"
- Avoid misunderstandings of instructions
- Increase over-all efficiency
- Produce more with less fatigue

FIBERGLAS

SOUND CONTROL PRODUCTS

Fiberglas (Reg. U.S. Pat. Off.) and Noise-Stop are trade-marks of Owens-Corning Fiberglas

Corporation.

Acoustical Tile Baffles Board Acoustical Tile Baffles

Skidmore, Owings & Merrill, Architects and Engineers

MODERN DOOR CONTROL BY 2011. CLOSERS CONCEALED IN FLOOR

SENIOR HIGH SCHOOL, OAK RIDGE, TENNESSEE

LEN CATALOG 11-E BN REQUEST OR SEE SWEETS . LCN CLOSERS, INC., PRINCETON, ILLINOIS



New, Fast-Acting, Automatic SMOKE-FIRE DETECTIVE

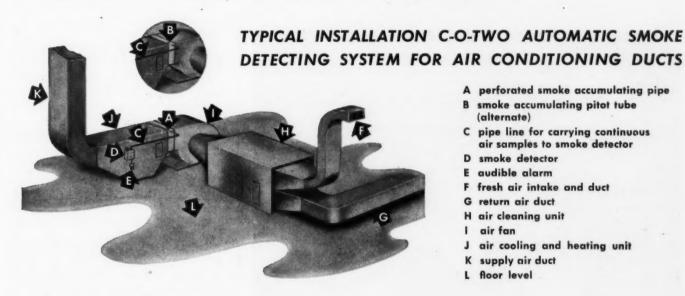


For Air Conditioning

Smoke in your air conditioning spreads fast . . . causes panic, spoilage and needless expense ... now all can be avoided by installing a modern, fully approved C-O-TWO Automatic Smoke Detecting System.

Smoke, smoldering and fire are spotted in the incipient stage anywhere throughout the air conditioning ducts, as well as via the return air from air conditioned spaces. Four types of smoke detectors and several different installation arrangements are available to fit your particular needs . . . for small air conditioning units, for large air conditioning systems, and whether with or without electrostatic precipitators. All C-O-TWO Automatic Smoke Detecting Systems function by drawing continuous air samples through simple piping to a smoke detector. The first trace of smoke sets off an alarm, based on an exclusive operating principle ... no chance of smoke spreading ... the air conditioning instantly shuts down, dampers close and fire extinguishing systems actuate.

Act now for complete free information and descriptive literature on this newest contribution to modern fire fighting. An expert C-O-TWO Fire Protection Engineer will be glad to help you in planning economical, fully approved fire protection facilities without obligation. (Special assistance rendered to qualified air conditioning contractors.)



- A perforated smoke accumulating pipe
- smoke accumulating pitot tube (alternate)
- pipe line for carrying continuous air samples to smoke detector
- smoke detector
- audible alarm
- fresh air intake and duct
- return air duct
- air cleaning unit
- air fan
- air cooling and heating unit
- supply air duct
- floor level



C-O-TWO FIRE EQUIPMENT COMPANY

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Sales and Service in the Principal Cities of United States and Canada Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

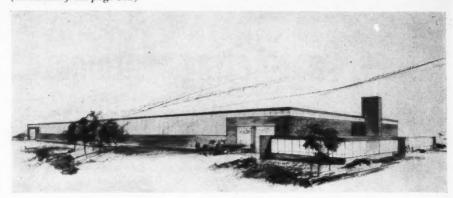
Squeez-Grip Carbon Dioxide Type Fire Extinguishers * Dry Chemical Type Fire Extinguishers * Built-In Smoke and Heat Fire Detecting Systems

Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems

THE RECORD REPORTS

(Continued from page 362)

Rigid-frame steel construction is estimated by Barancik, Conte & Associates, architects, to have saved from 12 to 15 per cent of the steel a more conventional design would have required in this warehouse and office for Interstate Steel Company in Evanston, III. Offices cover 3500 sq ft, warehouse and cutting departments 22,000 sq ft. Cost: \$200,000



One of the many extra-benefit features built into

NATIONAL LOCK SET

CLAMP PLATE QUICKLY ENGAGES KEYWAY... MERELY TIGHTENING CLAMP PLATE SCREWS FIRMLY FIXES LOCK ASSEMBLY IN DOOR ... SAVES INSTALLATION TIME

Shown here is another step in NATIONAL LOCKset's remarkably simple installation procedure. Extensively field proven on the job, NATIONAL LOCKset is fast becoming the Number 1 favorite among contractors, builders and architects because of its important savings of valuable time.





DISTINCTIVE HARDWARE ... ALL FROM] SOURCE

AVAILABLE FROM YOUR SUPPLIER

NATIONAL LOCK COMPANY
ROCKFORD, ILLINOIS . MERCHANT SALES DIVISION

• The surviving partners of Leonard Schultze and Associates have announced that they will continue the practice of architecture under the firm name of Lloyd Morgan and Eugene V. Meroni; Ann M. Maisch, executive. Offices are at 119 East 40th St., New York 16, N. Y.

New Addresses

The following new addresses have been announced:

Biggs, Weir and Chandler, Architects & Consulting Engineers, 336 Meadow-brook Rd., Jackson, Miss.

Everett I. Brown Company, Architects-Engineers, 1408–11 Circle Tower Bldg., Indianapolis 4, Ind.

Kenneth M. Cooke, Architect, 8 Fielding St., Concord, Mass.

Ward W. Fenner, Architect, 10 W. 33rd St., New York 1, N. Y.

Howard D. Fiedler, Architect, 211 E. Robinson Ave., Orlando, Fla.

Eliot Chapin Fletcher, Architect, 404 Marion St., Tampa, Fla.

Arthur Gorman, Architect, 321½ Dewey Ave., Bartlesville, Okla.

Norman Hulme, Architect-Engineer, 10 S. 18th St., Philadelphia 3, Pa.

Donald Lippincott, Architect, 421 Camlin Ave., Rockford, Ill.

Frank Y. Peteet, Architect, 750 Forrest Ave., Gadsden, Ala.

Charles F. Rabenold, Architect, 10 S. 18th St., Philadelphia, Pa.

ELECTIONS APPOINTMENTS

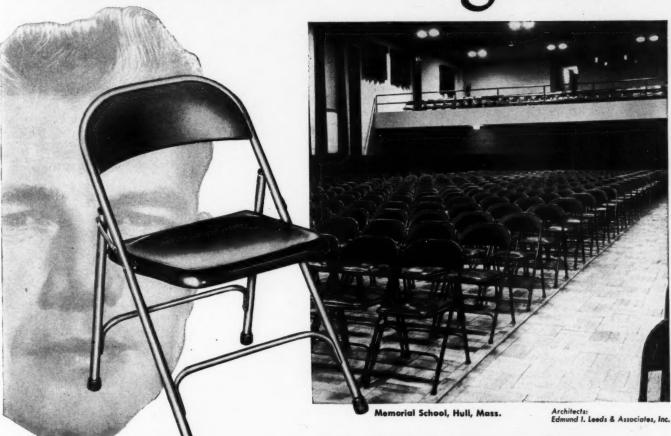
California Architects Elect

William Koblik of Sacramento was elected to succeed John Rex of Los Angeles as president of the California Council of Architects at an election meeting held February 28.

(Continued on page 370)

Men Who Design America's Finest Buildings Specify America's Number One Public Seating Buy!

Samson Folding Chairs



Scores Of Special Seating Problems

Solved For Architects By These Fine Folding Chairs...

Posture-Designed For Comfort And Built To Last!

ARCHITECTS' FREE TRIAL— Test America's No. 1 Public Seating Buy Right In Your Own Office!

• Examine the new Samson series 2600 folding chair at your convenience! See how it can help you plan for more efficient use of seating and storage space. Just write us on your letterhead, and we will send you, express prepaid, for examination right in your office, the new Samson series 2600 folding chair—America's Number One Public Seating Buy! No obligation. Special low prices on quantity purchases.

Here are three big reasons America's leading architects specify Samson Folding Chairs. They're low in cost, low in upkeep, long lasting!

Samson chairs are made of tubular steel of even heavier gauge than required by U. S. Bureau of Federal Supply specifications. They are electrically welded and cross-braced for extra strength. All metal is Bonderized, and the baked enamel finish resists chipping. Pittsburgh Testing Laboratory found that these chairs withstand metal finish tests actually in excess of Federal specifications!

Leading Users Of Samson Folding Chairs

Denver University, Denver, Colorado; Corning Glass Works, Troy, New York; Woodward & Lothrop, Washington, D. C.; Hotel San Carlos, Pensacola, Florida; Columbia Broadcasting System, Studio 21, New York, New York; St. Gregory's Church, St. Louis, Missouri; E. I. DuPont DeNemours & Co., Wilmington, Delaware; Matson Steamship Company, San Francisco, California; Kalamazoo State Hospital, Kalamazoo, Michigan.



Strong Enough To Stand On!

THERE'S A Samson FOLDING CHAIR FOR EVERY PUBLIC SEATING NEED

Shwayder Bros., Inc., Public Seating Division, Dept. J-3, Detroit 29, Mich. ALSO MAKERS OF FAMOUS SAMSON FOLDAWAY FURNITURE FOR THE HOME AND SMART SAMSONITE LUGGAGE FOR TRAVEL

A NEW SURFACE! A BEAUTIFUL THOROSEAL SURFACE!

PILGRIM BADGE BUILDING BOSTON, MASS.

Above photograph shows extreme blistering and spalling of concrete spandrel beams and columns of Pilgrim Badge Building, Boston, Massachusetts which is now entirely protected and further deterioration arrested.

Restoration of concrete spandrel beams and other structural concrete work done by contractor Henry Gironi, Allston, Massachusetts. THORITE Patching Mortar used to seal rods and patch blistered concrete and THOROSEAL to protect surface and patched areas.

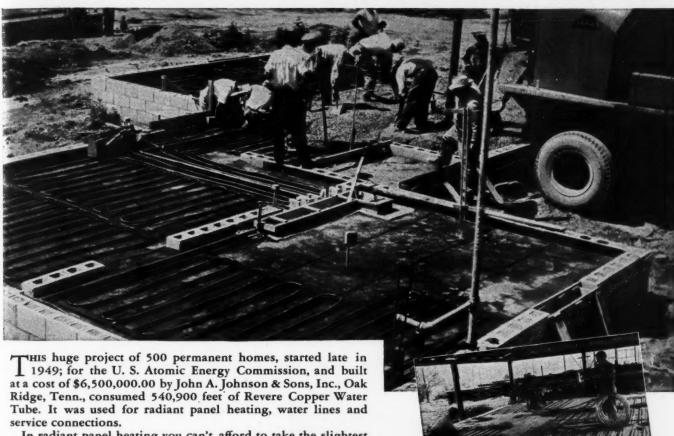
Standard Dry

40th YEAR

Wall Products

page brochure,
pictorially described in detail;
also, architect's
chart for your wall.

102½ MILES OF REVERE COPPER WATER TUBE AT OAK RIDGE, TENN.



In radiant panel heating you can't afford to take the slightest risk of materials failure. That's one big reason Revere Copper Water Tube has become so popular for this use. Architects and engineers like it because they know it will endure, makes for greater flexibility of design. Contractors and builders like Revere Copper Water Tube because it is non-rusting; costs less for workmen to install because its 60' lengths are easy to handle and bend ... requires fewer fittings than rustable, short-lived materials.

Although copper tube cannot now be used in civilian installations of radiant panel heating, we cite the Oak Ridge installation as a means of reminding you of the many merits of Revere Copper Water Tube over other materials so that when copper is once more permitted you will again use it. Meantime, you still can use Revere Copper Water Tube for underground service lines, domestic hot and cold water lines, industrial processing and for gas equipment.

See your Revere Distributor. He also will put you in touch with Revere's Technical Advisory Service in the event you wish to discuss technical problems.

REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801 230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago and Clinton. Ill.; Detroit, Mich.; Los Angeles and Reverside, Calif.; New Bedford, Mass.; Rome, N. Y.— Sales Offices in Principal Cities, Destributors Everywhere SEE "MEET THE PRESS" ON NBC TELEVISION EVERY SUNDAY TO SAVE TIME AND MONEY IN HANDLING and installing the radiant panels for heating, the Revere Copper Water Tube was speedily bent into wooden forms by hand, then wired to temporary frames and stacked flat until needed. Tube sizes ran from ¾" to 1¼".

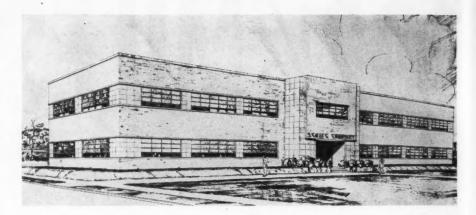


VIEW AT OAK RIDGE, TENN., of the 500 permanent bomes built for the U. S. Atomic Energy Commission. Architects—Skidmore, Owings & Merrill, Chicago, Ill. Oak Ridge, Tenn. Plumbing Contractor—Brown Plumbing & Heating Co., Birmingham, Ala. Revere Tube furnished by Crane Co., Birmingham, Ala.

THE RECORD REPORTS

(Continued from page 366)

New office building for Scaife Company is being erected near Scaife plant in Oakmont, Pa. The Austin Company of Cleveland are designers and builders. The building will have tinted filter glass windows, zoned air conditioning, acoustic fiber tile ceilings, composition floors. Reinforced concrete slabs are being used to save critical materials





CRAFTSMANSHIP-PERFECT FITTING-LASTING QUALITY DISTINGUISH

H·H·M METAL CABINETS

FOR HOSPITALS AND OTHER INSTITUTIONS

Built into every unit are the know-how and the craftsmanship which for well over a century have gone into the design and production of our world-famous bank vaults and equipment. That's why, in H.H.M. Hospital Casework, drawers slide extra smoothly and quietly, why cabinet doors fit extra snugly.

Ask for Catalog No. 510-018. Included in it you will find a list of modern hospitals—probably one or more in your locality—in which you may inspect H.H.M. Metal Casework installations.



Herring-Hall-Marvin Safe Co.

HAMILTON, OHIO

GENERAL OFFICES AND FACTORY—HAMILTON, OHIO. BRANCHES IN: ATLANTA, BOSTON, CHICAGO, DETROIT, HOUSTON, LOS ANGELES, MINNEAPOLIS, NEW YORK, PHILA-DELPHIA, SAN FRANCISCO, ST. LOUIS, WASHINGTON. Other agencies all over the world.

Other new officers are: Charles Fry, Los Angeles — vice president; Donald B. Kirby, San Francisco — secretary (new office); and Culver Heaton, Pasadena, treasurer.

William Hempel of Palo Alto was named to fill the new office of liaison officer with Women's Architectural League, a post created to foster closer relationship between A.I.A. and W.A.L.

Drover Heads Arizona A.I.A.

Richard Drover of Phoenix was elected president of the Arizona Chapter of the American Institute of Architects at the Chapter's annual meeting Mar. 1.

Lew Place of Tucson was elected vice president; Merlin Ray Young Jr., Mesa, secretary; and Fred O. Knipe, Tucson, treasurer.

Members of the Executive Committee are Mr. Drover, Mr. Young, Gordon Luepke of Tucson, Fred Weaver of Phoenix and Ed Varney of Phoenix.

San Diego A.I.A. Elects

1952 officers of the San Diego Chapter of the American Institute of Architects have been elected as follows: Louis A. Dean, president; Donald Campbell, vice president; Victor L. Wulff Jr., secretary; Richard L. Pinnell, treasurer.

Directors are C. J. Paderewski, George C. Hatch, and Jack R. Lewis. Mr. Lewis and Mr. Dean were named as delegates to the California Council of Architects.

NEW BUILDINGS

Lord & Taylor Plans to Open Fourth and Largest Branch

The first store Lord & Taylor has built outside the Greater New York suburban area, its fourth and largest branch, will get under construction soon

(Continued on page 374)



"All this supervision gives me the creeps! I wish this was a Heatilator Fireplace!"

You save on-the-job supervision time when you specify a Heatilator* Fire-place! You know in advance that it will work properly and that your clients will be more than satisfied. That's because this unit comes complete with firebox, throat, downdraft shelf, damper and smoke dome...fully assembled and ready to install. Construction is standardized and the scientific design protects you against rule-of-thumb building methods... assures smokeless, trouble-free operation.

The Heatilator Fireplace puts no limit on mantel design or use of materials . . . gives you complete freedom of architectural expression. It's ideal for basement rooms too . . . and as a supplemental source of comfort during service interruptions or emergencies. The leader since 1927, Heatilator Fireplaces have been proved in actual use by hundreds of thousands of satisfied home owners. Specify "Heatilator" in your next home or group of homes. Heatilator, Inc., 384 E. Brighton Ave., Syracuse 5, New York.

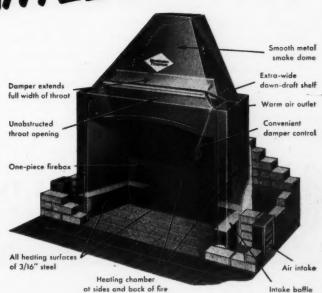
*Heatilator is the reg. trademark of Heatilator, Inc.

NO SMOKING - NO GRIEF -NO LIMIT TO MANTEL DESIGN!

with the

HEATILATOR

FIREPLACE



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74)

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Architects and Engineers: Holabird & Root & Burgee, Chicago, Ill.

New heights in comfort and convenience for the biggest hotel built in twenty years

THE NEW STATLER HOTEL now nearing completion in Los Angeles, represents the ultimate both in its appointments and construction. Comfort, convenience and efficiency are stressed throughout. Every room is air conditioned. There's an off-street concourse for motorist-guests who are checked in and whisked to their rooms without even going through the lobby. Dimmers on the ballroom lights, under-water lighting for the swimming pool, music in the passenger elevators are luxurious innovations typical of this truly modern hostelry.

And, though guests are unaware of it, their safety and comfort are further insured by NATIONAL Steel

Pipe-325 tons of it-used in the heating, fire-sprinkler and dry fire systems, as well as for vacuum lines.

Here, as in other famous hotels, apartment houses, schools, hospitals, office and public buildings, NATIONAL Steel Pipe was selected because of its consistently high record of service dependability.

U·S·S NATIONAL has been the standard pipe for over 60 years for conventional hot water and steam heating systems; for fire control and plumbing lines, and the first choice for modern radiant heating and snow melting applications described in Bulletin No. 19—Radiant Heating With National Pipe. Copy upon request.

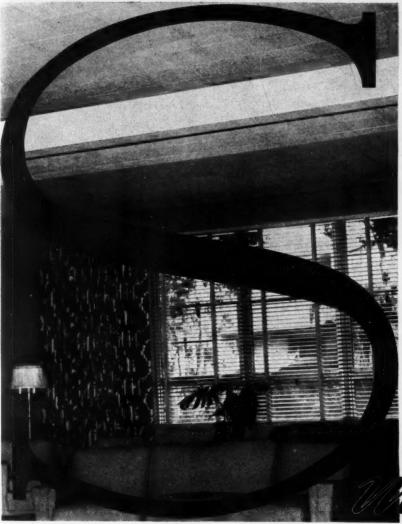


NATIONAL TUBE DIVISION

UNITED STATES STEEL COMPANY, PITTSBURGH, PA.

COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS . UNITED STATES STEEL EXPORT COMPANY, NEW YORK

UNITED STATES STEEL



Elk's Club, Leesburg, Florida Architect—Howell C. Hopson General Contractor—W. Alfred Smith, Jr. Acoustical Contractor—Cliff G. Haller, Orlando, Florida Acoustical Tile—Armstrong Travertone Acoustical Tile Alanufactured by Armstrong Cork Co. Installed on Standard System

vartuess

A SECURITEE SYSTEM* installation combines Quality, Durability and Smartness.

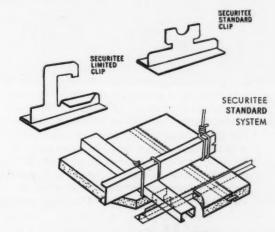
Top grade materials, rigid policing of suppliers and high manufacturing standards assure Quality.

Careful testing for weight load and correct job specification of component parts provides Durability.

Proper full length tee support to an entire ceiling area, making a truer and more level surface gives Smartness.

Specify and insist on SECURITEE—the outstanding suspension system on the market.

See Sweet's Architectural File or write direct for complete technical data



*T.M. Reg. U.S. Pat. Off.

W. J. HAERTEL & COMPANY

832 West Eastman Street • Chicago 22, Illinois.

West Coast Distributor FREY & HAERTEL, Inc., 125 Barneveld Ave., San Francisco 24, Calif.



THE RECORD REPORTS

(Continued from page 370)

on a 15-acre site in West Hartford, Conn.

Because of the sloping site, the store will be built on two levels, each with ground floor entrance and its own parking space. There will also be a penthouse for executive offices and employee facil-

Departments will be carefully correlated on the basis of intensive research





10' Ceiling Suspended 20' Floor Suspended 250.000 Coal 150,000 B.T.U. B.T.U. 200,000 Oil 300,000 Oil PER PER HOUR HOUR Gas 450,000 Gas 500,000

MAXIMUM HEATER OUTPUT **FOR** VAN-PACKER 7" I. D. FLUE

The Van-Packer Masonry Chimney handles the maximum heater output for most home installations. Van-Packer develops sufficient draft for heating plants designed to serve homes up to 10 rooms in size. Makes possible the central location of the heating plant—where heat runs are shorter and fuel savings greater. This means Van-Packer can contribute to architect planning and actually provide a more flexible house design at lower cost. Van-Packer has been tested and approved under the rigid standards of Underwriters' Laboratories for all fuels. F.H.A. accepted. Double sealed at every joint with acid-proof cement and joint band. Has a chimney wall of insulating vermiculite concrete and a fire-clay tile liner equal in insulating value to 24" of brick or 70" of ordinary concrete.



Nationally distributed through reliable heating and building material jobbers and dealers. Van-Packer Masonry Chimney is available for immediate delivery anywhere free architects, sheets and name of local

CORPORATION

Dept. 1404 . 209 S. LaSalle St., Chicago 4, III. Also Manufactured and Distributed in Canada by C. A. McRobert and Son, Ltd., St. Laurent, Quebec to save both customer and employee energy and time. The layout will follow a "shop within a shop" scheme for each of the departments.

The store will carry a complete assortment of men's, women's and children's merchandise, as well as a representative assortment of home furnishings. It will also have a fabrics and gift department.

Raymond Loewy Corporation is the designer.

Building Notes

• The chapel at Cambridge, England, designed by Perry, Shaw & Hepburn-Kehoe & Dean of Boston, architects, as a memorial to the American dead of World War II, is nearly completed.

Two murals by Francis Scott Bradford, one for a wall and one for the ceiling of the chapel, have been approved by the Battle Monuments Commission, under whose aegis the memorials to war dead are being built in Europe.

The chapel will also have sculpture, four stone figures representing the branches of the armed forces by Wheeler Williams.

 Construction of a new defense plant for the Kawneer Company is under way at Niles, Mich. All defense contract activities will be centered in the new plant when it is completed.

The building is of standard mill construction, with a total area of 100,000 sq ft. Required architectural work was handled by the company's staff under the direction of Trace Christenson Jr., A.I.A.

AT THE COLLEGES

Michigan Offers Fellowship

The College of Architecture and Design of the University of Michigan announces that the George G. Booth (Continued on page 378)



NORTH, SOUTH, EAST, WEST. In more and more public and commercial buildings, where heavy foot traffic is a logical activity of everyday business, HAKO Asphalt Tile Flooring is proving its durability and ease of maintenance. The scuffing and abrasive action of thousands of feet can't wear off the color or wear in the dirt. The original colors and design are maintained through years of service. Only normal washing with mild soap, followed by a water emulsion no-rub wax, preserves HAKO Asphalt Tile Flooring's natural beauty and design.

An attractive floor surface is the welcoming hand at the door of a commercial establishment . . . in a store or office building it is a mark of character and dignity . . . an added reason why HAKO Asphalt Tile Flooring should be chosen. There is no speculation when the best is specified. Floor beauty . . . downright durability . . . easily installed precision square cut tiles . . . wide selection of colors . . . You are assured of these exclusive features when specifying HAKO Asphalt Tile Flooring.

MEMBER ASPHALT TILE INSTITUTE

CHMEISTER-INC.

General Offices, Pittsburgh 13, Pa.

HACHMEISTER - INC. Dept. A-3

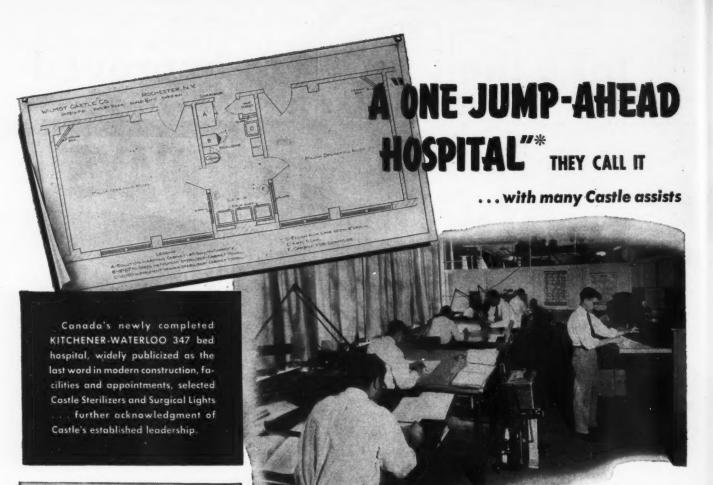
Pittsburgh 13, Pa.

Please send me details and specifications of HAKO Asphalt Tile Flooring

Send a HAKO representative to see me - - - - - - - -

Name

Address





Sub-Sterilizer Room Installation.



Central Sterile Supply, with sterilizers cycled by Thermatic governors with remote control supervision.

An innovation in having sub-sterilizing and scrub-up facilities in one room—as recommended by Castle, is a featured facility most favorably commented upon.

- Direct passage between corridor and sterilizers eliminates unauthorized traffic through operating rooms.
- Scrub-up sinks are placed on outer wall; sterilizers on inner wall nearest to nurse traffic. This saves nurses many minutes and steps in every operation. Surgeon's scrub-up is undisturbed, yet he may observe preoperative preparation of patient through transparent panel.
- Only 3 sterilizing units required!—Castle Hi-Speed Emergency Sterilizer . . . Castle Pressure Instrument Washer-Sterilizer . . . Castle Solution and Blanket Warmer. All dressings, utensils and flasked solutions and distilled water supplied by Central Sterile Supply.
- ARCHITECTS: Govan, Ferguson, Lindsay, Kaminker, Maw, Langley, Keenleyside-Toronto.

*The Canadian Hospital, Vol. 28, No. 7, p. 79, July, 1951.

We invite your request to place our Planning Engineers at your disposal, gratis . . . WRITE TODAY.

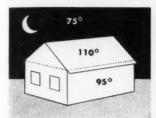
WILMOT CASTLE COMPANY 1258 University Ave. Rochester 7, N. Y.

Castle STERILIZERS AND LIGHTS

A 3-Minute Course on Low-Cost Home Cooling

HOW ATTIC VENTILATION COOLS A HOME

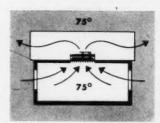
It's cooler outside at night



All day long a home absorbs heat from the summer sun. At night when outside temperatures have fallen to 75°, for example, the dead hot air in the attic may remain as

high as 110°. This keeps the rooms below at an unbearable temperature up to 95° or more. Nobody can sleep.

Attic fan pulls the cool air inside

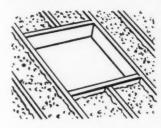


A Hunter Attic Fan pulls the cool, refreshing outside air into house, driving out the oven-like heat from the attic and every room. A few minutes after the fan is started, room

temperatures drop 10° to 20°. An automatic time switch can be used to switch off the fan while occupants sleep.

HOW TO MAKE PROVISION FOR ATTIC FANS IN YOUR HOMES

Step 1. Frame for ceiling opening



By framing and installing fan when home is built, no extra construction expense is involved. If installation is to be made later, framed opening can be temporarily plastered over or closed with plywood.

Step 2. Provide adequate louvers in proper location



On new construction it costs little to include exhaust openings to handle attic ventilation. These may be gable louvers or porch, soffit or basement exhausts, depending on the design of the house.

NEW HUNTER PACKAGE FAN IS INEXPENSIVE AND EASY TO INSTALL



A Hunter Package Fan is the most practical and least expensive method of keeping a home comfortable on hot nights. This compact unit is easily installed in any new or old home. Furnished complete with ceiling shutter and trim—no extras to buy or build. Choice of four sizes, to fit any home and climate.

This efficient attic fan is quiet and powerful, requires little or no maintenance. It costs only a few cents a night to operate and will last for many, many years. Backed by Hunter, exclusive fan makers since 1886.



Hunter ATTIC FANS See our section in Sweet's	Since 1888	MAIL FOR BOOKLET HUNTER FAN AND VENTILATING COMPANY 396 S. Front Street Memphis 2. Tennessee Send copy of "How to Cool for Comfort" to: Name
--	------------	---

THE RECORD REPORTS

(Continued from page 374)

Traveling Fellowship in Architecture will be offered again this year.

Applications, available upon request, must be filed not later than May 15.

The competition is open to all graduates of the College who will be under 30 on May 15.

Prospective candidates should write immediately to the Office of the College of Architecture and Design, 207 Architecture Building, Ann Arbor, Mich. "Design Studies in Europe"

An extensive travel program supplemented by a study period at a Swiss college high in the Alps is offered in the program "Design Studies in Europe 1952" to teachers, students and professionals in the fields of art, crafts, design, architecture and engineering.

The program will be conducted under the leadership of Prof. Antonin Heythum, head of the department of industrial design of the School of Art, College of Fine Arts, Syracuse University.

Studies consist of individually assigned investigations and a comparative survey of developments in art, design and architecture, with emphasis on contemporary trends, in France, Spain, Switzerland, Italy, Germany and Austria. An optional side trip will include Greece.

Tour dates are June 26-August 26. Details are available from Professor Heythum, School of Art, Syracuse University, Syracuse 10, N. Y.

FRANK STONE DIES AT 65; LONG ROANOKE ARCHITECT

Frank F. Stone, 65, senior member of the Roanoke, Va., architectural firm of Stone and Thompson, died January 20 at his home in Roanoke after suffering a paralytic stroke a month earlier.

Mr. Stone, who was a member of the American Institute of Architects, was associated with the late Edward G. Frye on the design of the Municipal building in Roanoke and in 1920 entered into partnership with Mr. Frye.

He prepared plans for a number of comparatively recent buildings in Roanoke, including the Colonial-American National Bank, the Ponce de Leon Hotel, the studios of WDBJ and the new mechanical building of the Times-World Corp. He also helped design the Roanoke First Baptist Church and the Governor Tyler Hotel in Radford, Va.

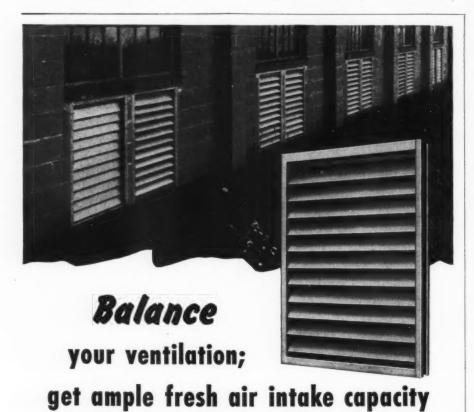
His firm has designed many school buildings, including buildings at Roanoke and Hollins Colleges and, among recent ones in Roanoke, Monroe Junior High School, and the new Lucy Addison High School now going up. The recently completed Roanoke City Health Center was also the work of the firm.

Mr. Stone was a member of the committee that drafted the new city building code now awaiting adoption in Boanoke.

Mr. Stone's partners, John N. Thompson and Frank G. Payne Jr., will continue the practice under the firm name of Stone and Thompson, Architects.

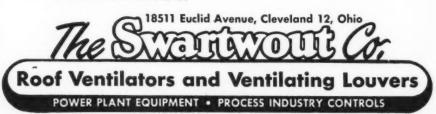
ADDENDUM

Henry Proskauer was associated with Harold Sterner, architect, in various parts of the design of the Virgin Isles Hotel (Architectural Record, September 1951, pages 138-143).



Custom-made for each job without premium cost, this weatherproof system provides unusual advantages — has better-than-average free opening area. The wide range of odd-size units available through our unique manufacturing procedure makes easy and economical the filling of any size opening. Overlapping blades are mounted in sturdy formed channel frame. Adjustable style features positive closing and quick change of blade position to any variation between open and closed. Airlouver is made in fixed-blade style also. Write for Bulletin 339G.

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CRANE'S FAMILY "T"

A practical idea for bathrooms that can be adapted in many ways



The "T" Bothroom features decorative woods, cork floors and grass-cloth wall in the dressing-table area, with bathing and toilet fixtures from Crane's Criterion group.

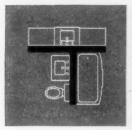
Here is an example of another Crane service for architects who design homes.

A simple "T" shape partition turns the trick-divides this bathroom into three sections to give 3 bathrooms in 1! All the facilities of the bathroom may be used simultaneously by different members of the family, because sliding doors provide privacy for each section.

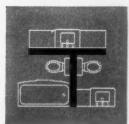
The flexible Family "T" bathroom is one of forty-eight rooms in the new Crane "Sketch Book of Ideas," an important part of Crane's new service to architects. This remarkable book can be used to help clients visualize and select new arrangements for bathrooms, kitchens, and utility rooms.

In addition, information on room arrangements and decorations is available.

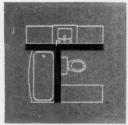
Ask your Crane Branch or Crane Wholesaler for complete details. Crane Co., General Offices: 836 South Michigan Avenue, Chicago 5, Illinois.



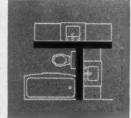
Another variation separates the lavatories.



Two compartments with Another way to provide closets in this "T" plan. separate lavatories.



The "T" plan with a single lavatory.



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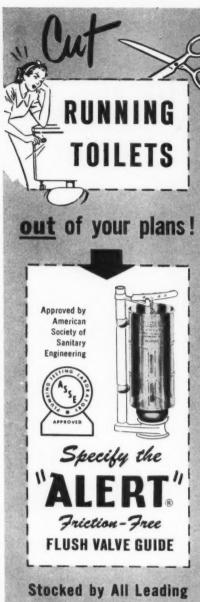
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CANADA: SUPPLIES

Only Steel and Aluminum Mar '52 Building Supply Outlook

Supplies of building materials seem adequate to support a high volume of construction in 1952, in spite of difficulties in the steel and aluminum pictures, according to a recent survey by The Financial Post, a leading business newspaper.

While Canada's domestic steel industry has embarked on a program to expand by one third, this source will not yield relief until early next year. Even then, requirements of defense and the development of strategic resources may nullify the projected increase.

Canada also depends on the United States, Britain and Europe for a large proportion of its structurals and plates. The very tight supply situation in those countries indicates that importation of steel will remain limited at least through 1952.

What the Survey Showed

Here, one by one, are the items covered in the Post survey:

Aluminum

Although considerable tonnage of aluminum in different forms was supplied to the building industry in 1951, demand could not be met. The defense program, particularly in aircraft and naval vessels, placed a very heavy load of responsibility on the aluminum industry. These defense requirements, on top of normal growth in demand for aluminum building components, brought about a short supply situation which cannot yet be remedied.

The outlook for this year is still obscure. Every effort is being made by aluminum fabricators to increase mill production; but defense requirements are still heavy and must, of course, come first.

Asbestos-Cement Products

Major expansion program is under way at Asbestos, Que. A site has been cleared for a new mill which will expand milling capacity considerably.

Brick, Tile

Deliveries will be somewhat speedier than they have been for the past few years, due to increased production and curtailment of housebuilding activity, as well as the steel shortage. Prices of brick and tile will be a little higher be-

(Continued on page 386)



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Reynolds Lifetime Aluminum Industrial Corrugated spreads its bright roofs all over the Amityville, L. I., area — through George Mole, contractor. Three schools, eight industrial plants, five commercial buildings. Sixteen in all (six shown in photo above)—and more coming! This is .032" with extra-deep corrugations (%"). George Mole says that besides low initial cost, this roofing gives him greater permanence, lowest maintenance, and heat-reflected comfort inside.

New forms and treatments of versatile Reynolds Aluminum continue to come from building designers. But standard forms can also be handled with originality ... and with obvious economy. Economy in initial cost, through mass-production. Economy in application ... through well developed methods, understood by more and more workers.

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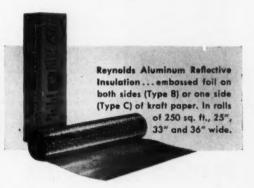
Louisville 1, Kentucky.



Reynolds Aluminum Residential Windows— Casement, Awning, Double-Hung — can be adapted to many uses. Made of Reynolds own extruded shapes, superbly finished, Above: Kansas City apartments — J. F. Lauck, architet; George Norton, owner-builder.



Reynolds Lifetime Aluminum Gutters come in 5" Ogee and Half-Round, smooth and embossed; also 6" Industrial Half-Round. Above development, Overland Park, Kanhas 5 miles of Reynolds gutters. Architects: Duncan & Mulhern. Contractor: Geo. Miller.







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Included are such features as: lumber, hardware and millwork checking list; quick-figuring tables for estimating concrete footings and walls, concrete piers, window frames, door and window areas, sash weights, nail quantities; how to figure labor hours per unit of work; rules for linear, area and volume measurement; lumber

reckoner; conversion of weights and measures, etc. The estimating short-cuts in figuring the amount of lumber needed for floors, walls, ceilings, roof, door, frames, drawers and cabinets, are alone worth the price of the book.

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Here are brilliant short-cuts to many, intriguing, every-day home building prob-lems: suggestions on excavations, foundations and forms; methods for making sills, girders, joists and sub-flooring; hints on exterior and interior wall construction; short-cuts in roof and bay construction; tips on making cornices and porches; ideas for interior wall covering and trim; helps on stair construction; window suggestions; ideas for hanging doors; tips on closets, shelves and built-in equipment; flooring pointers; aids in installing sanitary equipment. Detailed throughout with more than 700 how-todo-it illustrations! 211 pages. Price \$4.49

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This book is an exact working guide on every detail of house construc-tion from foundation to finish. Gives dimensions, materials, processes and point-by-point working methods through hundreds of scale drawings

and point-by-point working additions or changes in a building, or for complete construction of a dwelling. Conforms with modern practice and building regulations in all parts of the country. Gives latest ideas on painting, wiring, heating, air conditioning, insulation and soundproofing. Every step explained and illustrated:

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show how to:

build forms for foundations, footings,
walls, steps, walks; build sills, girder supporting posts and girders; figure loads for
house framing; layout, cut, and erect floor
house frame around a chimney and stair
well; lay out rafters for a gable roof,
dormer roof and porch roof; lay floors and
sub-flooring; frame outside and inside
walls, allowing for openings; brace and
sheathe up outside walls; erect ceiling
joists; sheathe gable ends and rafters; build
cornices; lay shingles; build porches and
bays; apply siding; frame up inside walls;
construct stairs; place trim around windows and doors; fit and hang sash and
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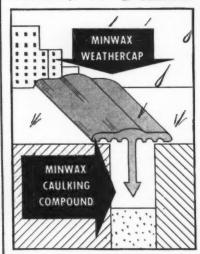
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CANADA: SUPPLIES

(Continued from page 382)

cause of increased wages, higher costs of replacement parts and taxation.

Cement

Scarcity was at its peak last summer. Supply is better now and will continue to improve during 1952. A new plant has opened in New Brunswick and additional kilns will be operating late this year in Belleville. Outlook for 1953 is good.

Concrete Products

Last year the concrete products industry supplied the Canadian market with nearly \$100 million worth of masonry units. A good demand for all types of concrete products is expected in 1952, and no shortages are foreseen.

Control Equipment

No difficulty in raw material supplies is anticipated. On the other hand, because of government credit restrictions, purchases of automatic heating equipment are expected to be lower than in 1951.

Unless the Federal Government relaxes restrictions on mortgage loans for new housing and down payments on certain types of automatic heating equipment such as oil burners, it is possible that the automatic heating industry may have a mild slump in the immediate future.

Copper, Brass

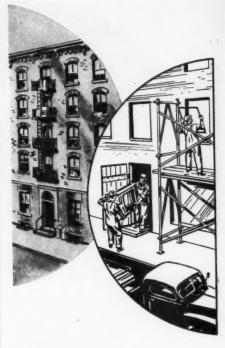
Copper tube for plumbing and heating lines is in good supply and should continue to be unless there is an unprecedented increase in construction. At present, the supply of raw materials for copper and brass mill products is on international allocation. Defense requirements get priority from this allotment of raw materials.

Since the peak of the defense program will not be reached till Fall, copper and brass mill products should be in good supply throughout most of 1952.

Electric Wiring Materials

No shortage is anticipated. The United States copper shortage will not affect the Canadian picture. Defense orders could make heavy inroads in the available supply; but with the sizeable projected cut-back of consumer durables this year, sufficient material should be available from that source to fill defense needs.

(Continued on page 390)



They carried the 9000 lb. boiler thru a 3-ft. doorway

When an H. B. Smith No. 44 cast iron boiler replaces an old heating plant in a rejuvenated apartment house — as they do in many, many cases — it isn't necessary to tear out a wall or make other structural changes in order to get it into the boiler room. Section by section, the 44 is carried through conventional entrances for easy assembly on the job. This advantage, plus the amazing economies in fuel and maintenance gained through using Smith boilers, has made them first choice of property owners everywhere.

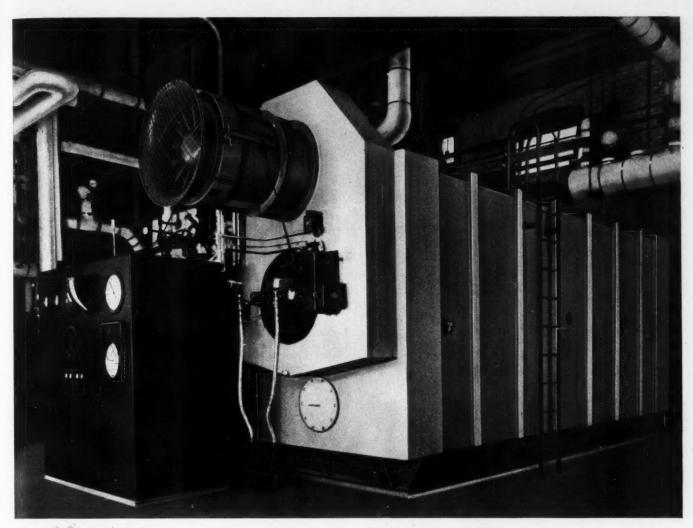


The unusual amount of prime heating surface of the 44 Smith-Mills boiler — more than any other cast iron boiler of compara-

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This popular self-contained unit is available for efficient heating and process steam-generation from 2900 to 28,000 lb per hr. at pressures to 250 psi. It's worth investigating.

Send for bulletin G-76 detailing advantages of this latest B&W creation in low-cost steam generation. The Babcock & Wilcox Company, 85 Liberty Street, New York 6, N. Y.



G-560



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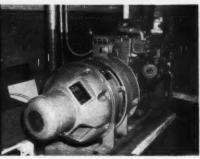
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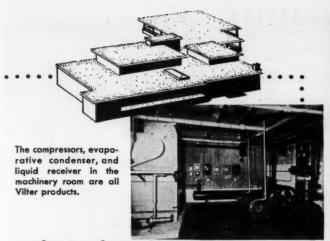


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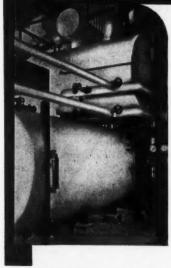


equipment adds low operating cost and minimum upkeep to its reliability, plant after plant has standardized on Vilter.

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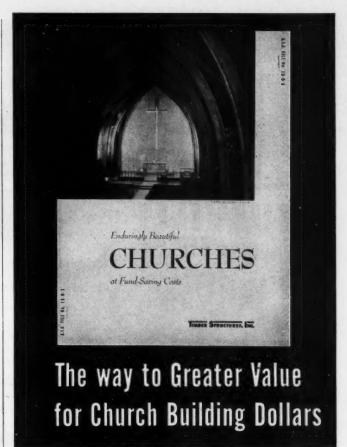
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CANADA: SUPPLIES

(Continued from page 386)

Fibreboards, Hardboards

Prospects are that hardboards, in comparatively free supply during the first three or four months of this year, will be in somewhat tighter supply by late Spring, when a backlog of orders is anticipated, probably continuing through the balance of the year. Some easing in the last quarter is possible.

If defense requirements necessitate, hardboards might be in shorter supply than insulating fibreboards, because of their greater number of industrial uses.

Glass

Sheet glass supplies are ample. Two window glass plants now operating in Canada are capable of supplying at least two thirds of the probable demand. In addition, considerable supplies are coming from Great Britain and Europe.

Plate glass for storefront construction and other building purposes is in good supply.

Glass blocks and constructional glass, figured, decorative and cathedral glasses are available in quantity.

Gypsum Products

With little carryover of residential and business construction requiring materials for completion in the first quarter of this year, gaging plasters, finish lime, gypsum board and gypsum lath are in free supply. However, strong demand is expected to develop starting May 1; and demand will exceed production in the third quarter peak months of 1952.

Heating (warm air)

. The problem for warm air heating appliance manufacturers should be one of sales rather than supply. The market for furnaces is controlled to a great extent by the volume of residential construction. The supply of furnaces will be adequate in 1952.

Lumber

The outlook for 1952 is good. Expectations are that prices will advance. Costs are mounting in every department. While there has been no manpower shortage as yet, a stimulated recruiting and defense program could produce one. The steel shortage has held up much construction, although it also presents the lumber industry with a chance to regain lost markets.

Inventories are satisfactory — ade-(Continued on page 394)

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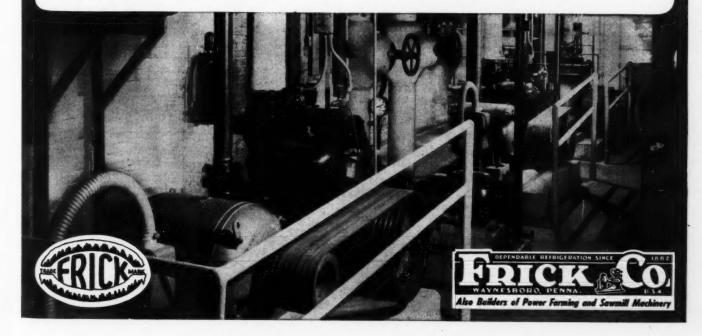
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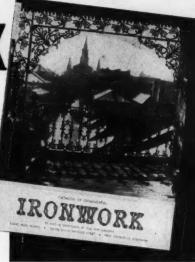
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CANADA: SUPPLIES

(Continued from page 390)

quate in view of uncertainties, but not excessive. If the United States election produces an undue stimulation in demand, there could be shortages of some items.

Mineral Wool

Supply has improved this year, and prospects are generally good.

Paint, Varnish

There may be some fall-off in quantities available for consumer use, resulting from the increase in defense construction. Barracks, hangars and other buildings in the defense program all require paints and allied materials. Civilian needs are also increasing, not for new urban homes but for rural homes, plants and utilities.

This double strain, combined with curtailment of certain basic materials, could result in tightness in some civilian lines. The situation should ease before the year is out.

Plumbing, Heating (hot water)

In general no shortages are foreseen for the coming year. The availability of large size steel pipe may affect industrial construction: nickel may enter the picture. Under present conditions and at the present rate of demand, the industry is confident it can meet all requirements.

Plywood, Douglas Fir

New increase in plant capacity will raise production totals higher than the record 400-odd million ft turned out in 1951. A strong market will continue in 1952. Reports of a slump in the U. S. plywood market have been replaced by reports that prices have bounced back owing to a sudden increase in demand. Strengthening of U. S. market is taken as further indication of favorable Canadian market.

Plywood, Hardwood

Mills have arranged for an increased log supply, and are getting the logs out. Both the increased export demand and the increased domestic demand are expected to be met by the industry.

Roofing

It is in seasonal supply at the present time. Temporary shortages may be expected during peak demand period, July to November.



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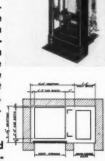
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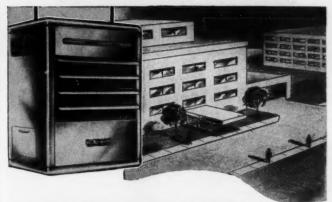
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ARCHITECT — The supervising architect's office of the University of Michigan has an opening for an assistant supervising architect. This man will act in a liason capacity between the University and architects and builders working on university projects. His training and experience should be sufficiently comprehensive so as to include medium and large size structures. Applicants should include an outline of experience and salary desired with the letter of application. Personnel Office, University of Michigan, Ann Arbor, Michigan.

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THE RECORD REPORTS

(Continued from page 26)

of all the services; standardized space allocation bringing equivalent space for equivalent grades.

Chief Weapon: Title VIII

Director Coogan considers Title VIII of the National Housing Act—the Wherry-Maybank Amendment—to be his chief weapon. This, he says, will continue to provide the bulk of housing space for military personnel, and a good share of housing for civilian workers at military installations.

Virtually all of this type of shelter has been, and will continue to be, built on military reservations. In approving Wherry Act projects, officials are bound by law to consider carefully the availability of housing in the immediate area to avoid conflicting impacts. The base in question must be certified as a "permanent" one by the military service. The majority of such FHA-insured housing built to date (all rental) has been for enlisted men, said Mr. Coogan, despite many nasty charges that federal planners had been building an unnecessarily superfluous quantity of Title VIII shelter for officers.

Wherry Act Total: 89,000

As of recent date, some 89,000 Wherry Act units had been certified from the start of the program nearly two years ago. Of these, 23,000 now have been completed; 38,200 are under construction; and 28,000 are in the "development" stage.

(Continued on page 402)



Joseph W. Lund of Boston, Mass., has succeeded Alexander Summer of Newark, N. J., as president of the National Association of Real Estate Boards





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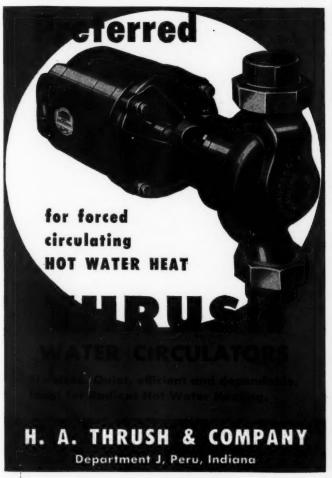
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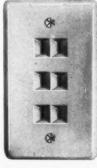


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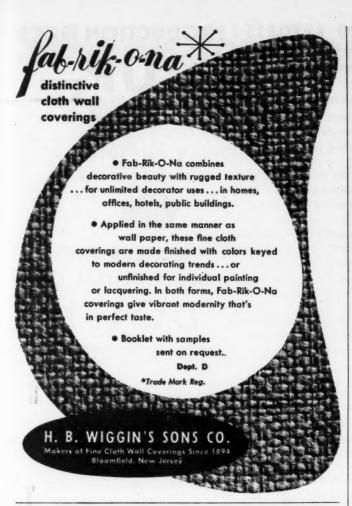
All convenience outlets shall be General Electric triple remote-control outlets, either RO-1 with common feed or RO-2 with separate feed, as indicated on the plan drawing.

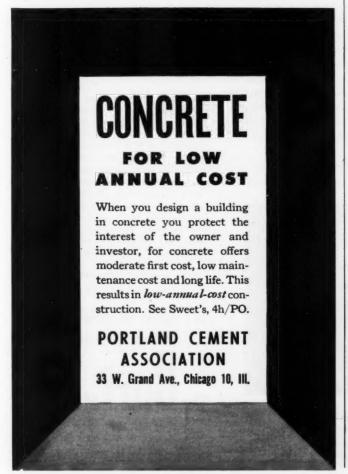
Triple outlet with plate, common feed, common ground, in ivory plastic (RO-1).

Triple outlet with plate, separate feed, common ground, in ivory plastic (RO-2) permits wiring of unit to provide one or two switch-controlled outlets while remaining outlet or outlets are permanently live.

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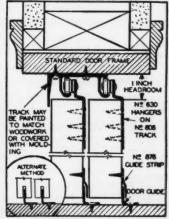
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(Continued from page 398)

Architect Selection Argued

Architects have been watching with keen interest certain undertones of argument over the planning procedures for this type of housing.

A staff report to the Senate Banking and Currency Committee is mildly critical of the newer procedure of architectengineer selection; that is, selection of a sponsor and the designation of A-E on a low-bid basis. The older procedure, in use before amendment of the Act, permitted the sponsor to bid from his own plans and specifications - those of his own choice.

If Mr. Coogan has his way, the newer system will be pursued, even though a return to the old is talked up in high places.

In Mr. Coogan's opinion, standardized bidding procedures and similar criteria are benefits. He also views as advantages the shorter lapsed time between certification and start of work, benefitting all services.

Low-Bid System Attacked

Here is the way the staff report to the Senate Committee put the problem:

"With very few exceptions it is the opinion of almost everyone we discussed the program with - the military, the FHA, the builder and the mortgage industry - and it is our tentative conclusion that the new procedures will result in unnecessary delay in getting the housing under way and in many instances result in less house for money expended.

(Continued on page 406)



Col. Edward J. McGrew Jr., who has been on active duty with the Army, has resumed his post as chairman of the N. Y. State Building Code Commission

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> See Sweets or write for Bulletin SPV-6

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by Heinrich H. Waechter, A.I.A. and Elisabeth Waechter

HOUGH many volumes have been written about school design, "Schools for the Very Young," a brand new book just off the press, is—so far as we know—the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school de-



manded for the proper training of the very young child. Beginning with a brief yet adequate historical and philosophical background, in which the development of the theory and practice of child education is discussed, the book goes on to describe the pre-school in action, noting the events of the school day and the corresponding environmental needs of the children and their teachers. Examples of existing pre-schools are presented with critical comment. Detailed information is given concerning the space apportionments and arrangements called for by the activities peculiar to such institutions. Since one of the authors is especially concerned with city planning, the relation of the pre-school to its neighborhood and community is analyzed, and the many different types of pre-schools that have developed to meet special conditions are enumerated and explained.

The outdoor space and its proper equipment are thoroughly covered from the standpoint of a capable architect who has given much thought to the problem. Technological problems of construction, lighting, ventilation, mechanical equipment, etc., are scrutinized in the light of the most recent practice. A wealth of illustrations add both interest and information, and a selective bibliography will aid further study.

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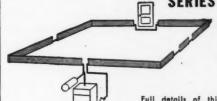
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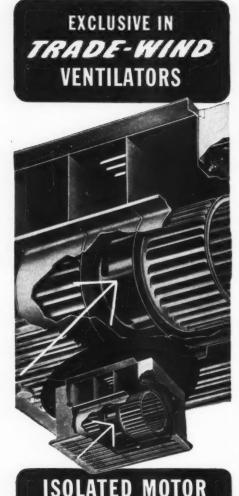
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THE RECORD REPORTS

(Continued from page 402)

"It is estimated that the architectengineer low-bid system results in from
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a project under way in normal circumstances, and could result in a project
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"The new procedure has offered an opportunity for the shoestring operator to bid in on a project with the hope that he will be able to peddle the project once he gets it, or even if he is a legitimate builder, subsequently to negotiate a more favorable deal or withdraw. We have received information that sometimes as many as five or six low bidders had to be washed out to get a legitimate bid. A simple cure for this would seem to be the request of a one per cent performance bond. Subsequent to this review, the Department of Defense established a requirement for a certified check of \$25,000 to accompany bid proposals to insure closing with FHA."

Operation by Directive

Actually, under a recent directive, the Army has been negotiating directly the so-called small Wherry Act jobs — those under 75 units — and thus circumventing the architect-engineer procedure. The services have been authorized by the Office of the Secretary of Defense to negotiate directly and without competition those projects of 75 units or less. This method has been used in a very limited way to date, however.

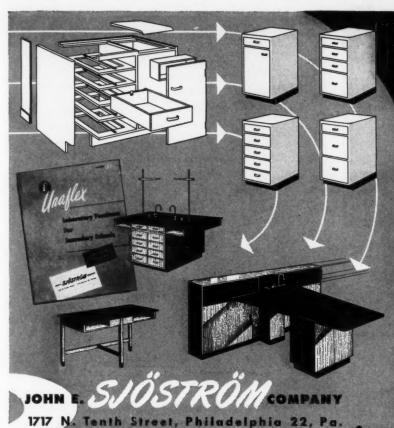
AFHA and Title IX

Mr. Coogan's office is concerned only obliquely with the Title IX Defense Housing program now gaining momentum under the direction of the Housing and Home Finance Agency.

If this housing, chiefly for immigrant workers in defense areas, involves a military operation, Mr. Coogan then is

(Continued on page 410)





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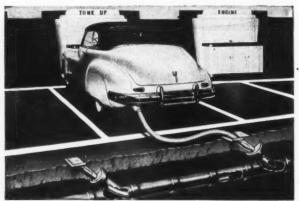
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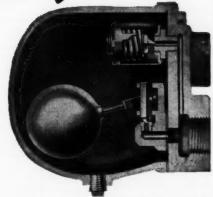
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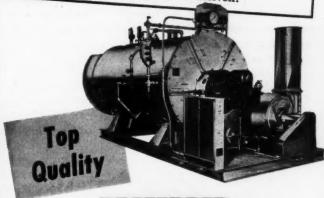
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THE RECORD REPORTS

(Continued from page 406)

concerned with its programming and advises the HHFA. So far the military has been vitally affected with Title IX operations. For example, of 144 areas recently certified as critical defense regions, 117 were predominantly military; the other 27 had only minor or no military significance.

Domestically the military housing job is greater now than in actual all-out war. This is because in wartime the major problems are focused overseas, personnel is on the move, and the permanent type shelter now required in the current military build-up is not needed.

Cost Limit May Need Revision

The Wherry Act presently limits expenditures to \$8100 per unit and construction so far has naturally followed the maximum pattern. The cost limit may have to be raised, and rent schedules adjusted upward, to do a thoroughly adequate job. It's becoming increasingly difficult to entice private capital investment into the remote areas where Title VIII housing must necessarily be constructed. The same, of course, holds true in large degree for Title IX operations. But this latter program is just now receiving its initial test while the Wherry Act has undergone its own baptism long since.

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In developing a prototype unit in the Title VIII program for each equivalent rank of all services, the AFHA seeks better architecture in the same space.

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The type of housing being erected is determined largely by land use, but most of it so far has been of the garden style apartments. Only real multi-story units erected were at Fort Hamilton, N. Y., where land arrangement made the planners turn to this type. The Title VIII units will continue to be of the garden type, Mr. Coogan said.

Prefabrication is being encouraged wherever it can compete on a relative basis with permanent housing. Mr. Coogan feels that prefab construction will have larger opportunities under Title IX. There the attitude seems to be: the more prefabrication the better.

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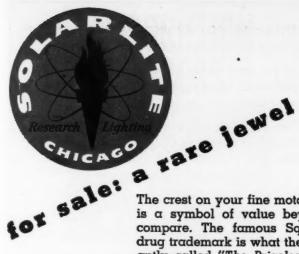
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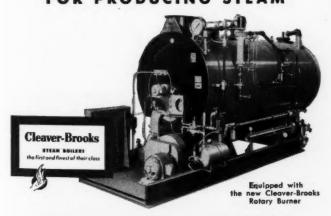
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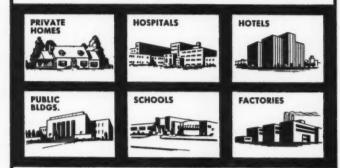
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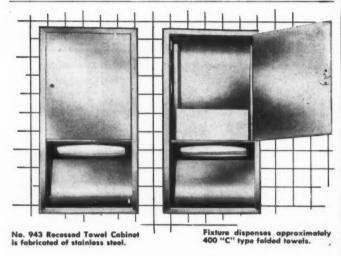


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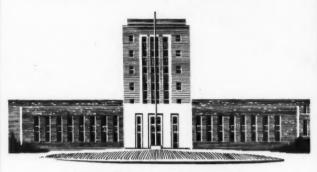
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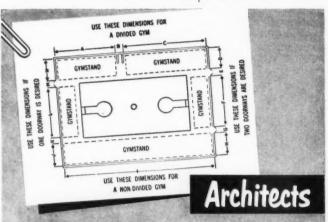
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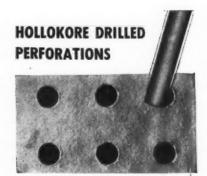


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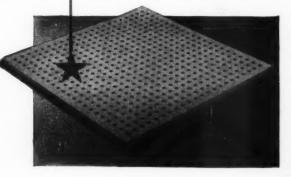
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REQUIRED READING

(Reviews continued from page 48)

at Willow Run happened," they say, "because Americans haven't yet given thought to making such things happen any other way; because in a disturbed situation we still prefer to rely on the political power struggle rather than to subordinate our own interests and prejudices to the technological needs of a common objective, and because we have not yet learned how to live with social change."

NEW EDITIONS

Bauhaus, 1919-1928. Edited by Herbert Bayer, Walter Gropius and Ise Gropius. Charles T. Branford Co. (Boston, Mass.), 1952 — This is a second printing of a book which was first published by the Museum of Modern Art in 1938 and which is referred to in the Preface as the most complete and authoritative work on the Bauhaus school, its ideas, influence, and importance to the field of modern design.

IES Lighting Handbook. Published by Illuminating Engineering Society (1860 Broadway, New York 23, N. Y.), 1952 -For the past three years thirty-four committees of the IES have been revising the 1947 edition of this book. Over 75 per cent of the material in this edition is new or completely revised.

BOOKS RECEIVED

American Urban Communities, By William C. Hallenbeck. Harper & Brothers (49 E. 33rd St., New York 16, N. Y.), 1951 -This book is published as one of Harper's Social Science Series. It is an up-todate, broadly inclusive treatment of the social aspects of urban life in the United States. In it American cities are considered as part of the overall pattern of American culture.

Early American Architecture. By Hugh Morrison. Oxford University Press (114 5th Ave., New York, N. Y.), 1952 -A study of early American architecture from 1565 to 1848 with particular emphasis on the many styles and the conditions that produced them. Illustrated.

(Reviews continued on page 418)



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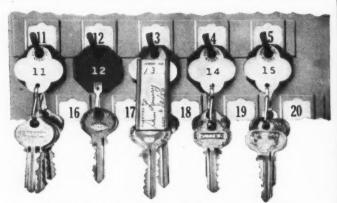
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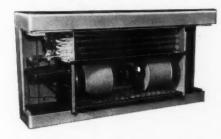
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REQUIRED READING

(Reviews continued from page 415)

Forms and Functions of 20th Century Architecture. Four volumes. Edited by Talbot Hamlin, F.A.I.A. Columbia University Press (New York, N. Y.), 1952 - According to a pre-publication release - publication is scheduled for April 14, 1952 this is the most comprehensive work thus far produced on contemporary architecture. In it are presented the theories and concrete achievements that have revolutionized the design of buildings in the last half century. Among the well known contributors are Pietro Belluschi, F.A.I.A., Henry Churchill, F.A.I.A., Alfred Fellheimer, F.A.I.A., Wallace K. Harrison, F.A.I.A., William Lescaze, F.A.I.A., Lewis Mumford, honorary associate of the A.I.A., George Nelson, A.I.A., G. Holmes Perkins, F.A.I.A., and Isadore Rosenfield.

Building in England. By L. F. Salzman, F.S.A. Oxford University Press (Amen House, London E. C. 4), 1952 — A scholarly and well documented historical work on the building industry in the Middle Ages, with emphasis on methods of construction.

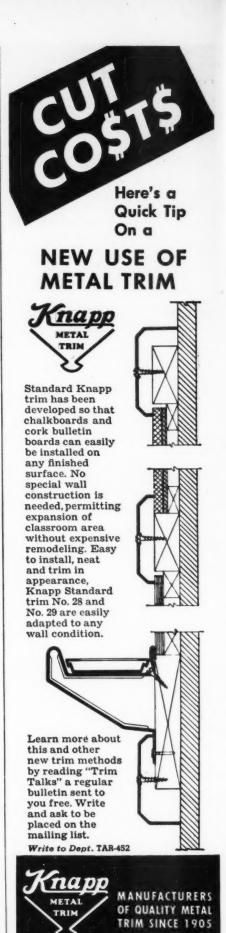
Housing Market Behavior in a Declining Area. By Leo Grebler. Columbia University Press (New York, N. Y.), 1952 — The aim of this book is to throw light on housing market behavior in general through an analysis of the housing market on New York's Lower East Side over a period of nearly fifty years.

Building Trades Blueprint Reading and Sketching, Basic Course. Delmar Publishers, Inc. (Albany, New York), 1952

— Designed primarily for beginners in the building trades, this workbook explains simply the elements of drawing and interpreting plans and working drawings. Sketching assignments and quiz reviews are included, and each section is illustrated with lucid examples.

Everyday Household Appliance Repairs. By William H. Crouse. McGraw-Hill Book Co., Inc. (330 W. 42nd St., New York 36, N. Y.), 1952 — A book for the handy man about the house who likes to fix it himself.

Mount Rushmore. By Gilbert C. File. University of Oklahoma Press (Norman, Oklahoma), 1952 — The story of the unique and mammoth project of carving the faces of Washington, Jefferson, Lincoln, and Theodore Roosevelt in granite in the Black Hills of South Dakota. Illustrated.



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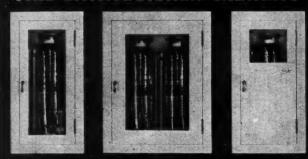
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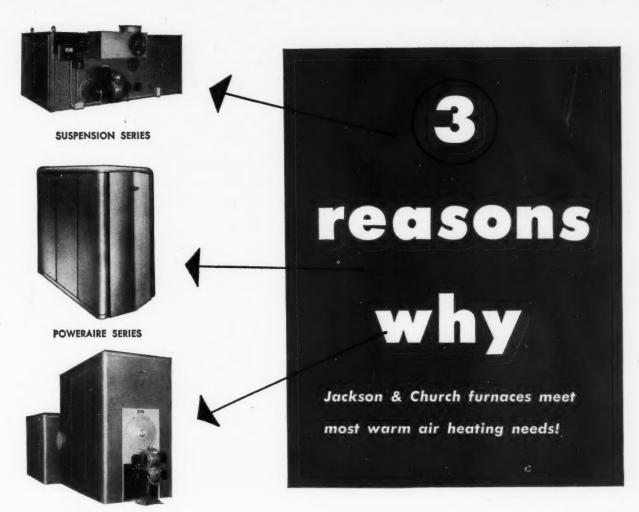
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(The Index to Advertising is now on page 6)



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